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W. Legh

A
Short but Exact
ACCOUNT
Of all the
DISEASES
Incident to the
EYES,
WITH THE
CAUSES,
Symptoms, and Cures.

MANCHESTER MEDICAL SOCIETY

ALSO
Practical Observations upon some
Extraordinary Diseases of the
EYES.

By Sir *William Read*, Her Majesty's Oculist,
and Operator in the *Eyes* in Ordinary.

The Second Edition, Corrected.

L O N D O N: Printed, and Sold by
J. Baker, at the *Black-Boy* in *Pater-Noster-*
Row. Price, Bound in Calf, 2 s. 6 d.

(1708?)

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AGO 4836

(23.4.58)

ACCOUNT

DISEASES

EYES

CAUSES
Symptoms and Cures

Practical Observations upon some
Essential Diseases of the
EYES

By Sir William Keble, M.D. Master of the
Hospital of St. Thomas, London.
In two Volumes.

LONDON: Printed and Sold by
J. Baskin, at the Bath for Dr. James Keble.
Rox.



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Of

Of all the

DISEASES

Incident to the

EYES.



*Some Errors committed by the pretended
Practitioners for the Eyes.*

Nothing being more common, than as soon as a Patient complains of Pain, or any other Grief of the Eyes, to have recourse to all sorts of Medicines, without any regard to their Vertues or the true Nature of the Disease, I will describe the several Remedies commonly used and advised by those, who without Fear or Judgment, use any Medicine for any Disease of one particular part.

Within the compass of these come Allum, Copperis in Powder, or Waters made of them, or mixed with other things *Lapis Tuttiæ*, Water or unguent of *Tuttiæ*, which they call Tutty, Juice of Daisie Roots, Ground Ivy, Celandine, Agrimony, Fennel, Housleeke, and such like, Roasted Apples or Crabs, Oyl of Wheat, Oyl of

of Paper, Oyl of Snails, Honey and Gall, Salt and Sugar Candy, Water made of Verjuice and Lead, Oyl, Nutmegs and Rose-mary applied to the Head, Cammomile to the Feet, infusion of May-Weeds to drink in Ale : Some of them lick the Eye with their Tongues, some draw a cutting Grafs through the Eye, and smooth it with a gold Ring : Some put a Lowse into the Eye, the Juice of Goose Dung, the white part of Hens Dung, &c.

Amongst these, with many other Medicines that are used, I hold some idle and frivolous, some good, if they be used with good Understanding and Judgment ; the Disease being known, and the Nature and Properties of the Medicines. For the better Understanding of the Nature and temperature of every Simple, as Herbs, Waters, Minerals, and such like, as are most in use for the Eyes, I have set them and their Faculties down in this Book ; to which place I refer the Reader.

There is especially a gross and most pernicious abuse among some pretended Practitioners, in the use of certain sharp Waters, in cases of sharp Defluctions into the Eye, which causing a hollow Ulcer in the *Cornea*, they mistake for a *Pearl* or *Web*. By the use of these sharp Waters, the Ulcer is not only made larger and deeper, but also oftentimes the Membranes being corroded, the Humours issue forth and the Eye sinketh ; whereas by easie, gentle, and familiar Medicines, the Pain might have been eased, the Ulcer healed, and the Eye preserved : Which I have often done with such Medicines as are without any corroding Quality, but cooling, comforting and strengthening the Eye.

A short Catalogue of most Medicines commonly used for the Eyes, together with the best Method of using them.

A Llum, Copperis, Sandiver, Salt and such like, these used alone or mixed with other Powders, or Waters made with them, must not be too sharp; for sharp Medicines destroy the force of the visible Spirits: And though the pain be eased, and the Rheum stayed; yet they remain with a dull sight ever after.

Juice of Agrimony, Celandine, Dazy-Roots, Housleek, and such like; these may be used for small Pearls, being new and fresh, and well prepared and cleared, with the white of Eggs: These Juices must not be long kept; for when they grow sowre, they get a sharp and acid Quality, which offends the Eye, and hinders the true Operation of these Juices.

Lapis Calaminaris and *Tutia*; these may be used in Powders, or Waters, so that they be well prepared, by heating and quenching them in Childrens Urine, and are then good to be used in cold Defluxions.

Oyl of Wheat, Oyl of Paper, Oyl of Snails; these are very violent, sharp and painful: I never heard that any ever received good by them, but much hurt; so that I hold them not fit in any Disease of the Eyes whatever.

An Unguent of Herb Christopher; this Unguent is used of many for Pearls and Webs: It hath a sharp and absterfivè Quality; it cleareth *Cornea* of cold and moist Humours. But oily unctuous Medicines are not to be used inward-

ly to the Eyes, but are especially unfit to stay Fluxes, and to allay Inflammations.

Medicines apply'd to the Forehead and Temples that have an adstringent Quality, or to the Neck, Wrists and Feet, such as have an attractive Quality ; these are not fit to be used, before the Body and Head be well prepared and purged.

For the white part of Hens-dung and the Juice of Goose-dung, these are not fit nor proper Medicines to be used to the Eyes, for any Diseases.

For the Powder of the Hobgoblin Shove, Nutmegs, Oyl, and Rosemary to the Head, Cammomil to the Feet, infusion of May-weeds for a Dyet-drink, Licking the Eye with the Tongue ; I cannot commend the use of any of these Medicines ; and though I have known them to be used by many, yet I never could see any good Effect of them.

Fretting upon the *Cornea* with an Eye-spoon like a Grater, this is good, if artificially used.

To draw a Cutting-grass through the Eye, and to smooth it with a Gold Ring, cutting or scraping upon *Cornea* Wounds are healed, but Scars are never so ; so that a Scar upon *Cornea* dulleth the sight. Webs upon *Conjunctiva* that spread over *Cornea*, are cut with good success, if performed by a good Artift.

Of imperfect Cataracts.

HAVING by frequent and reiterated Experiences, observed great variety of Symptoms and Accidents in the couching of Cataracts, I will in this place discover some of them for the

the satisfaction of the careful Operator, and the ease of the aggrieved Patient. These may most properly be called imperfect Cataracts. As I have met with some, that so soon as I have couched the Cataracts to press or work them down, all the Eye hath overflowed with a milky Substance; I cannot conjecture otherwise than this Substance to have been contained in the Cataracts, as in a Bladder, which suddenly spreading all over the Eye, hindreth any further working by the Needle. At other times, so soon as I touched the Cataract to press it down, all the Eye overfloweth with Blood, so that nothing but a confused Colour of the Eye appeared all bloody, and that it hindred the further Operation at that time. Some others I have couched, that as soon as I began to work in the Eye, have turned like the knobby or extuberant part of an Oyster-shell, and as big again as they seemed to be before: So that no part of *Cornea* or *Uvea* could be perceived; which would never couch well, being a very fearful and uncomfortable sight to the Operator. Some others, though they seem to be good and fair Cataracts; yet in the couching, they are so tough and solid, that still, as they are couched, they start up again, and will not be couched well at first: These require a great deal of good Judgment; because they will not dilate well as the former. In couching of other Cataracts, though they have been of long continuance, sometimes of seven or eight Years, yet they are so soft, that the Instrument passeth through them, as though it were a soft Gelly, and must be left imperfectly couched. Some others I have met with so closely join'd to some part of the *Uvea*, that in couching of them, one may soon draw *Uvea*

all awry (as I have seen some) than to couch them well : These are the worst of all, and commonly come by Blows ; for the event of these Cataracts (as the milky, bloody, soft, &c.) after nine Days, as Vapours are dispersed with the Sun, so these Accidents have worn away by gentle and easie means : 'Tis true, some small Rags did remain, but the Patient recovered his sight.

Cobweb-like Cataracts.

AMongst the imperfect Cataracts, it is very proper to insert the Cobweb-like Cataracts ; which are thick in the midst, like a white Pearl, and thin near the edges or circumference. I have known some that have had these Cataracts ten or twelve Years, yet at this time can see to go, read, or feed themselves, though imperfectly : Amongst many others, I met with one that had such a Cataract at *Walsingham* in *Norfolk*, who desired my help : When I came to couch it, after the entrance of my needle, coming to the top of the Cataract to bring it down, I found it join to *Uvea* round about the sides, with many small Threads, or rather Hairs, which could hardly be divided or separated by reason of their Number, yet in the end couched reasonably well ; and she saw as well as she did before : But after nine days, returning thither to visit my Patient, found her and her Friends highly discontented because she could not see so well as she did before ; so that I met with nothing but bitter Invectives, till having pacified them as well as I could, with fair words, I came again. Within a Fortnight after, when Art and

Natur

Nature having performed their mutual Operations, all the cloudy vapours and rags of the Cataract were consumed and dispersed; her Eyes grew clear, her sight became perfect, and so continued ever after : As I cured divers others that did well of the same sort of Cataracts, so I would wish every Patient (though after a Cataract be couched, and nine days expired, he see little or nothing at all, or that his Eyes be tender, and cannot endure the light for a Month or two, or a quarter of a Year, as I have known many) not to be discouraged : For their sight may notwithstanding all this become well and perfect, and so continue ever after. On the other hand, some come to good and perfect sight within a Fortnight or three Weeks after the Cataracts are couched.

Amongst imperfect Cataracts, it will not be beyond our Scope to speak of Cataracts *Black*, *Green*, *Yellow*, and *White* : though they be mentioned before by other Authors. As to the black Cataract, there is no such disease : for a Cataract is a Water congealed, before the Cristaline humour : In this there is no Water congealed, therefore no Cataract : But in the black Cataract, the malignity or peccant quality of the humour doth destroy the force of the visible Spirits, alter the natural constitution and colour of the Eye, and maketh the Eye obscure, dark, and dull ; with a fixed dilatation of the *Pupilla*, little or nothing differing from *Gutta Serena*. For the other three imperfect and uncurable Cataracts according to the quality of the predominant humour which is the cause of them, so is the colour ; yet in all these there is an obstruction of the Nerves, and an alteration of the colour of the
Cristaline

Cristaline humour, with a callosity or hardness of the whole Eye, and privation of sight. Therefore in the first beginning of all these use preventions; for which I never found any thing so good or effectual, as my *Cerevisia medicata*, or purging Ale; without the use of which, few Diseases of the Eyes, that come of moist Rhumes or Defluxions can be well cured, and the sight preserved. Thus much of imperfect Cataracts. As for the best time to couch Cataracts, it is to be done on a fair and calm day, chiefly in the Spring and Autumn, and about the full Moon.

Having spoken of some Distempers of the Eyes difficult to be cured, I will relate one to that purpose, call'd *Gutta Serena*, as being an obstruction of the *Optick Nerves*

I was sent for from *Stamfort*, to a Gentlewoman of great worth in *London*, to give my judgment for her Eyes, she being lately taken blind: upon view of her Eyes, I found an incurable Cataract in one, and a *Gutta Serena* in the other; with that Eye where the *Gutta* was, she could see nothing at all: I therefore judged that there was no certainty of the Cure; yet some hope there was, because she had not been long blind. She desired my best help, and referred the blessing to God. I left with her directions how every Medicine should be used, and so departed. She continued the means, and carefully observed my directions, not intermitting one day for six Weeks together, but without receiving any benefit in her sight: the seventh week she began to see a little; so by degrees came to a good and comfortable sight of one Eye. Another I cured at *Roydon*, that was afflicted with the *Gutta Serena*, the humour so much abounding in her head, that she had

had by Convulsions her mouth drawn awry ; who by the same means was perfectly cured. Another at a place called *Bridge-Casterton* near *Stafford* I cured in four or five days. The same means I have used, (but not with so good success,) to some others that had strong and able bodies, and younger than the former which I cured. Because I found this Cure so doubtful and uncertain, I thought not fit to insert the Remedies I used. When it pleaseth God to enable me so as to understand a more perfect Cure for this dangerous Disease, I will publish the means that are most effectual and approved, whereby the Practitioner and the Patient may be the less mistaken in their expectation ; but, according to my observation, I will shew my opinion, in which cases there is some hopes of a Cure. If the humour settled in the Concavities of the Nerves, be grown to any solid, or hard substance, there is no possibility of a cure. Which may be judged of four ways : First, if it be of long continuance : Secondly, if they see no light at all of the Sun, Fire, or Candle : Thirdly, if one feel the Eye, by rubbing upon the Eye-lids, to be grown more solid and hard, than naturally it should be : Fourthly, if one perceive no dilatation of the *Pupilla*, then there is no hope of Cure. Contrarywise, if the sight hath been lost but a small time, *viz.* a month or two, if the Eye feels soft and pliable, if there be any dilatation of the *Pupilla*, though it can scarcely be perceived, yet there is some hope of Cure ; but I must advise all such as are subject to this Disease, if they perceive any Flies, Hairs, or Shadows before their Eyes, to look to themselves (these being Messengers either of Cataracts, or obstructions

ctions of the Nerves, which is called *Gutta Serena*) and presently by purging, and strengthening the Brain, to prevent the danger. But in those that are subject to Melancholy, either naturally or accidentally, they may rather judge them to be the beginning of Obstructions of the Nerves, than the Fore-runners of Cataracts.

The mistake and mismanagement of certain Medicines pernicious to the Eyes : As for Instance ;

SOME will put a Lowse in the Eye, which is good when the Eye is dull, obscure, and dry, and wanteth Humours and Spirits; a Lowse then put into the Eye, tickleth and pricketh, so that it maketh the Eye moist and rheumatick, and quickneth the Spirits. But being used to an inflamed Eye, caused by Defluxions, it increaseth the Flux and Inflammation, and so doth much hurt.

So the Seed of *Oculus Christi*, if any small Mote or Grain of it is put into the Eye, the Grain or Mote sticketh unto it, by reason of its mucilaginous and slimy Substance, and so bringeth it forth, but being otherwise used, doth more hurt than good.

Likewise, a rottten Apple some times used to a sharp and painful Defluxion proceeding from Choler, may mitigate and ease the Pain; but being used to a moist and rheumatick Eye, proceeding from too much Blood, the Veins and Arteries of the Temples and the Eye-lids being extended with much heat and inflammation, it then causeth a distension and putrefaction of the whole Eye ;
the

the Effects whereof I have seen by the Application of this Apple.

It is also a common Practise among such as have Inflammations and Defluxions of Humours, which cause Pearls, Spots, &c. and do overshadow and dull the sight, to give Eye-bright, Betony, Fennel, Vervain, Sage, and such like, to help the Diseases aforesaid: Which Herbs, I confess, have a quality to strengthen the Brain and quicken the Sight; but in this case they do hurt; for by their quality, of warming and comforting the Brain, they increase the Heat and Inflammation, and so dull the sight: Which is not impaired by reason of the weakness of the sight, or visible Spirits in the Brain, but by reason of the Inflammation and Defluxion which make the Eye so tender and weak, that they cannot endure the Light, (for a weak sight cannot bare a strong Light) which defect is not internal, but external; which gross mistake hurts and spoils many Eyes

Another Error is in dressing of the Eyes: They will dress the Eyes for the former Disease, with some sharp Water of Allum, Copperis, or such like, 3 or 4 times in a Forenoon, so that as soon as the sharpness of one dressing is past, then beginneth another, and another, as if *Rome* was built in one day, or a Disease in the Eye were to be cured in one Hour: Whereas they do not consider that much use of sharp Medicines, either Collyries, Waters, Powders, &c. do destroy the force of the sight, or visible Spirits: Therefore beware of such hasty Cures, which may well be called hasty Dangers; for tender Parts must be tenderly dealt withal, if you will handle them with safety.

I remember that my self have used (sometimes (though seldom) a Water made with *Lapis Calaminaris*, to an inflamed Eye, and it hath proved a present Remedy. Whereas when I have used it at another time for the same Disease, it hath made the Disease worse than it was before: Which, if I had continued, would have made the Patient quite blind. Hence it is that no Artift, if he expects a happy cure of any Disease, must tie himself to the strict use of any one peculiar Medicine, which will help some as a present and precious Remedy, yet in some others will absolutely spoil the cure, though in the self-same Distemper; so that a good Oculist ought to be an expert Artift in this Oculary practice. I will supersede to speak of the true use of other Simples, for fear of being too tedious and troublesome.

Cataracts may be of too long a growth or standing.

Whereas it is a common Saying among the Vulgar; that the longer one is blind of Cataracts, the better they are to be couched, by reason they are grown firm and strong: I must declare, that I find it not so; for when they are of long continuance, they grow so exceeding strong and tough, that they cannot be well couched, but with some considerable pain and trouble to the Eye. And it commonly happens that when any one hath a Cataract in one Eye, which is grown dark with it, that the same Humour which caused it, still abounding in the Head, is easily carried with the visible Spirits to the other, and thus encreaseth the same Disease

sease; so that if a Cataract be firmly settled in one Eye, tho' they see well with the other; it is better to have that cured in time, because the couching of that, doth prevent the growing of a Cataract in the other Eye, more than any other means that can be used.

I have made this Observation to answer that Obejection frequently mentioned by some, that after they are made to see, they grow blind again: Which never is to be apply'd to Cataracts, if once well couched, and so continue but one Month: And among all these, I praise God, not one in ten has ever had a Relapse of this kind, after the Cure.

It may happen that some (tho' few) being made to see of Cataracts, that, opening their Eyes to soon, or in the disorder by some dressing them, or taking of cold, or evil Diet, or other Mismanagement, may create such Fumes as ascend up into the Brain, and cause a sharp and painful Defluxion. The Patient being tender and weak, and not able to endure the pain, and is forced to use other means, as sometimes derivatives or drawing Medicines to the Neck or Arms, or stupefactive Remedy's inwardly or outwardly. I have known some who by those means have had their sight to such a degree dulled and weakned, that afterwards it proved incurable; for which reason I always refused and disallowed of such-like Remedies.

I will give you an Instance of this kind. At old *Debnum* in *Suffolk*, I made a very old Man see of both his Eyes, and leaving him certain directions how to behave himself; he, the ninth Night, about two a Clock in the Morning, took all from his Eyes; and that day in the After-
noon



noon, on a bright Sun-shiny Day, went with some others into the open Air, and with great expressions of Joy told the standers by, he could see his Hand and Fingers : But soon after on a sudden he fell blind again ; so that he could see nothing at all : Which News being brought to me, I with much ado, recovered some sight again. The Reason of this was, he having been in the dark so long, and suddenly opening his Eyes, the force of the Light of the Sun and Air dispersed and weakned the Spirits, and so caused this sudden blindness.

Another in *Newgate-Market* in *London*, at the *Black-Boy*, having a Cataract well couched by an Oculist was seiz'd with some pain and a Defluxion of Humours : Having no direction left by the Oculist against those Symptoms, he was advised to apply brown Paper to his Neck ; which he did ; by this Application the Defluxion was stayed, his Pain eased, but the sight utterly lost, and could never after be recovered in that Eye, tho' I made him see with the other : The cause of this change was, that the Defluxion abounding in his Brain, the Humour was suddenly condensed in the optick Nerves, and so deprived him of his sight. This may serve as an Instance how soon an Eye is lost, and by good means soon saved.

Concerning drinking in the Morning for the Eye-sight.

IT is a kind of custom among some sort of people, to drink a large draught of Beer or Ale in a Morning, before they wash their hands, and that to such a quantify that their Eyes stare
in

in their Heads : and this (they say) is good for their Eye-sight. From whence this custom has taken its first original, I never have been able to learn. But it hath been related unto me, that a Beer-brewer in *Southwark*, who had almost lost his sight, did thus recover it. It seemed to be a disease, called in Greek, *Symptosis*, in Latin, *Concidentia* : proceeding from the dryness of the brain, whereby the Nerves were withered, contracted and cornigated or wrinkled, the holes or porous passages thereof being obstructed. In this disease large drinking, and consequently moistning of the Brain, might moisten, relax, and open the Nerves, and very well cure him. But I am perswaded that a thousand have drunk themselves blind, by following his example : For most diseases of the Eyes owe their causes to moist and rheumatick humours, which are contrary to his disease : Therefore much moistening the brain by drinking is pernicious to the Eyes ; though for some bodies, I hold drinking in the Morning good, but so as to eat a little, then to drink a moderate draught, which may be very good, especially for cholerick Constitutions : I speak this of healthful bodies : for the sick, I leave them to better directions.

Because

Because for want of due Knowledge of the true Temperature of Simples, very pernicious Errours are committed in the Cures of the Eyes; I thought fit to insert here the natural Temperature and Operations of most Simples used in the Diseases of the Eyes, according to the Opinion of the best approved Authors.

Water, cold and moist in the first degree, reperssive.

Vinegar, cold in the first, dry in the third degree, aperitive and discutient.

Allum Water, dry in the fourth degree, absterfive, reperssive and cooling.

Verjuice, cold in the second degree, in the third degree reperssive.

The Juice of Slows, cold and dry in the third degree, reperssive.

Little Sorrel, cold and dry in the second degree, reperssive.

The yellow of the Rose, cold and dry in the first degree, reperssive.

Worm-wood, hot in the first degree, dry in the second degree, absterfive, strengthens the Nerves.

Agrimony, hot and dry in the second degree, absterfive.

Aristolochy hot and dry in the fourth degree, adustive and attractive.

Alloes, a Gum, hot in the second, dry in the first degree, consolidative

Starch,

Starch, cold and dry in the first degree, lightly binding.

Fat or Grease of Hogs, hot and moist in the first degree, emollient and ripening.

Annis-seed, hot in the third dry in the second degree, a dissolutive and corrective of flatulent humours.

Dill, hot and dry in the second degree, resolute and discutient.

Orpiment, of the property of Arsnick.

Roche-allum, hot and dry in the third degree, stiptick.

Antimony, or Stibium, cold in the first degree, dry in the second, purifying and purging, but not without due preparation and proper correctives.

Amoniacum, a Gum, hot in the third degree, dry in the first, emollient and attractive.

Atramentum, a Mineral, hot and dry in the third degree, a corrosive and stiptick.

Mallows, dry without notable heat and cold, appeases and disperses peccant humours.

Chickweed hot and dry, conglutinative.

Amber, hot and dry in the second degree, comforteth the brain and disperses the gross humours.

Silver, and the Dross or Filings thereof, cold and dry, conglutinative.

Gold, temperately hot, comfortative or Cordial.

Bolarmoniack, cold and dry in the second degree, repercussive, adstringent.

Butter, hot in the first degree, and more moist, maturative.

Shepherds-purse, cold and dry, adstringent.

Borass, hot and dry, temperately consolidative.

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Vervain,

Vervain, hot and dry, slightly consolidative.

Betony, hot and dry in the first degree, mundificative.

Cammomil, hot and dry in the first degree, resolute and emollient.

Coral, cold in the first, dry in the second degree, adstringent.

Ceruse, cold and dry in the second degree, maturative, and absterfiv.

Saffron, hot in the first, dry in the second degree, Resolute, Cordial and Anodyne.

Celandine, hot and dry in the third degree, absterfiv.

Copperice-tree, hot in the first, and dry in the beginning of the fourth degree, stiptick, and corrosive.

Cumin, hot in the third, and dry in the second degree, carminative.

Cheese, the new is consolidative, but the old of a contrary quality.

Woodbine, hot and dry, vehemently restraining.

Our Ladies Thistle, hot and dry, inflative, and moderately piercing.

Garden-Saffron, hot in the second, dry in the first degree, maturative, and digestive.

Knot-grass, cold in the second, dry in the third, adstringent.

The great Comfrey, hot and dry in the second degree, conglutinative.

Daisies, hot and dry, resolute conglutinative.

A Mineral, constringent adustringent.

Camphire, cold and dry in the third degree, adstringent and discutient.

Ver-

Verdegrease, hot and dry in the third degree, corrosive, and stiptick.

A Stone, which unquenched, is hot in the first, and dry in the second degree, consolidative.

True Endive, cold and dry, slightly adstringent.

Eye-bright, hot and dry, it quickneth the sight and memory.

Counterfeit Agrimony, hot and dry in the second degree, mundifieth and loseth.

Fennel, the Seed is hot and dry in the second degree, resolute and emollient.

Wheat, hot and moist temperately, maturative and mundificative.

Iron, cold and dry in the second degree, adstringent and consolidative.

Fennegreek, hot and dry in the first degree, maturative and emollient.

Green-figs, hot and moist, the dry to be hot and dry, maturative and emollient.

Mill-duft, cold and dry, conglutinative.

Olive-leaves, cold and dry, stiptick.

Hogs-Fennel, hot in the second, dry in the third degree, mundificative, incarnative and cicatrifative.

Gall, hot and dry, more or less, according to the creature; mundificative, and absterfive.

Galls, the green are cold in the second degree, and dry in the third, stiptick.

Cloves, hot and dry in the third degree, comfortative and discutient.

Gum Arabick, cold, with a certain dryness, and gleutinous quality.

Barley, cold and dry in the first degree, mundificative.

Ground-Pine, hot in the second, dry in the third degree, adstringent: C 2 Lin

Lin-feed, hot and dry, maturative.

Milk, temperate, whose serous or watery-part is mitigative and consolidative.

Licorish, temperate, with a certain humidity, maturative.

Lettice, cold and dry in the third degree, loosneth and cooleth.

Pearl, cold and dry, comfortative.

Iron dross, cold and dry, consolidative.

Maftick, hot and dry in the second degree, an emollient.

Mellilot, hot and dry in the first degree, resolute.

Honey, hot and dry in the second degree, mundificative and a Stomachick.

Myrrhe, hot and dry in the second degree, incarnative.

The less Celandine, dry in the first degree, restrictive.

Red-lead, cold and dry, cicatrifative.

Bramble, hot and dry, adstringent.

Pomegranates, sour, cold and dry, the sweet cold and moist, comforting the stomach.

Mace, dry in the third degree, without manifest heat: adstringent and cephalick.

Mirobolanes, cold in the first degree, dry in the second, stipticks.

Cypress-nuts, hot and dry, adstringent.

Nutmegs, hot and dry in the first degree, comfortative and stomachick.

Salt-peter, discutient, cooling and mundificative.

The juyce of black Poppey dried, cold and dry in the fourth degree; stupefactive, and mortificative.

Barley, cold in the first degree, maturative and absterfive.

Rice,

Rice, hot and dry in the first degree, adstringent and nourishing.

Olibanum, a Gum, hot and dry in the second degree, consolidative.

Plantain, cold and dry, repercussive, somewhat adstringent and consolidative.

Purslen, cold in the third, moist in the second degree, mitigative.

The Poplar-tree, cold and dry repercussive.

Fleewort, the Seed is cold in the second degree, and moist in the first.

Pepper, hot and dry in the fourth degree, attractive, mundificative.

Fat, hot and moist, maturative, and emollient.

Lead, cold and dry in the second degree, resolute.

Garden Poppey, cold in the fourth degree, stupefactive (or rather hypnotick.)

Wild Pellitory, hot and dry in the second degree, mundificative.

Rose-flowers, cold in the first, dry in the second, lightly binding ; this is the White : The red is more adstringent, and less cold : the Damask is partaker of both in lighter substance.

Bramble, hot and dry, stiptick and consolidative.

Roasfalger, hot and dry, mortificative.

Rosemary, hot and dry, absterfise, resolute and cephalick.

Rew, hot and dry in the third degree ; ulcerative, aperitive, digestive and Alekipharma-tick.

Rosin, hot and dry, mundificative and consolidative.

Great Nightshade, cold and dry in the fourth degree, stupefactive.

Sumach, cold in the second, dry in the third degree, stiptick.

Houfleeck, cold in the third, dry in the first degree, repercussive.

Spikenard, hot in the first, dry in the second degree, comfortative or Cordial.

Salt, hot and dry in the second degree, absterfive.

Saunders, cold and dry in the second degree, repercussive.

Spodium, cold in the second, dry in the third degree, consolidative.

Sarcocol, hot in the second, dry in the first degree, incarnative.

Filings, dry, and much consolidative and adstringent.

Spunges, hot in the first, dry in the second degree, consumptive and desiccative.

Fome of the Sea, hot in the first, dry in the third degree, absterfive.

Elder, hot in the second, dry in the first degree, resolute and fudorifick

Seeney, hot in the second, dry in the first degree, absterfive and aperitive.

Siler-mountain, hot and dry in the second degree, aperitive

Salt-armoniack, hot and dry in the fourth degree, absterfive and digestive.

Sal-gemm, another kind of Salt, hot and dry, absterfive, mundificative.

Sisela, a Seed, hot and dry in the end of the second degree, is diuretick.

Frankincense, hot in the second, dry in the first degree, incarnative, consolidative.

Lapis Tutia, a Stone or Mineral, cold in the first, dry in the second degree, quickneth the Eye-sight.

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Tormentil, hot and dry, absterfive and somewhat adstringent.

Three-leaved-grass, hot and dry in the third degree, aperitive, absterfive.

Wheat, hot in the first degree, without manifest dryness or moistness, attractive and digestive.

Terra sigillata, hot and dry, adstringent.

Wine, hot and dry, or moist, even according to the Age thereof, maturative and consolidative.

Urine, hot and dry, absterfive, aduusive and discutient.

Earth-worms, conglutinative, and comforting the Sinews.

Vitriol, hot and dry in the third degree, stiptick and corrosive.

The wood of the tree Balsam, hot and dry in the second degree.

Sugar, hot and moist, slightly consolidative.

Ginger, being green, it is hot in the third degree, and moist in the first : But being dryed, it is dry in the first degree, heateth the Stomach, and disperseth moist and cold humours.

B O O K I.

Containing a Description of the Eye.

C H A P. I.

Of the Benefit, Use and Situation of the Eyes.

GOD hath created and framed the Eyes with such extraordinary Wisdom, and endowed them with such marvelous Excellency and Beauty, that deservedly they may be judged the most perfect piece of Work which is in our Body; whether we consider the conveniency of them, their use and motions, their place, their rampiers and defences, the matter whereof they are composed, the beauty which is in their form and shape, or the diversity of their colours. Concerning their conveniency and use, they are given unto Man principally for the benefit of Sight, and to guide and direct him to the Knowledge of God, in beholding his fair and goodly Works, whereof we can neither have Knowledge nor give Judgment by any other Sense, but by the Eyes; as also to serve in the place of Guides and Leaders to the whole Body. To give the Eyes their due, they have such a Sway, and, as you may say, a Sovereignty

verieignty amongst all the Senses, and over all parts of the Body, that those which are deprived of Sight, either by Nature, or by any other mishap, do think themselves justly very miserable. They could not have been placed more fitly then in the highest and most eminent part of all the Body, as it were in a sublime high Tower and Station, seeing they must serve as Spies and Watchmen to defend and guide all the other parts : For the better conveniency of them, Nature most wisely hath made two hollow Places or Troughs in the Head, named from their circular Figure, *Orbitas*.

C H A P. II.

Of the Rampiers and Defences of the Eyes.

THE Eyes are compassed and armed above and beneath, on the right Hand, and on the left, and on every part, not only for their protection and defence, but also to make them appear more beautiful and fairer. And indeed the Nose serveth as a Rampier and Bulwark unto them, by purging them and the Brain of superfluous Humours. The Bones, named *Ethmoides* and *Jugale*, are no less commodiously placed for their preservation and conveniency. And concerning the Eye-lids wherewith they are defended and covered : They are not only an Ornament, but also serve as Gates, and, as it were, like Drawing-bridges, having their Muscles instead of Chains to lift them up and let them down, according as it is most expedient, either for
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seeing, sleeping or walking, and to stay whatsoever might fall into them. On their Edges they have the Hairs called *Cilia*, which are as little Pales straight and sure, placed in a convenient distance one from another, that they might mutually embrace each other, whereby the Eye should be more surely shut. Moreover, they serve to direct the Beams in seeing, that they may look more straitly; and in like manner to defend them against little Flies, against the Dust, against little Chips or Shivers, and such like Things, which entring into them, might occasion considerable hurt to them. They do also beautifie them, being set in good order round about them, not unlike an edge or little border. Not unlike to these are the Brows with their Hair; which besides the Ornament the Eyes receive from them, serve principally to defend them against Rain and the Sweat coming from the Head and Forehead, which descending down, might fall upon them to their detriment. For this reason it is that they were fashioned like unto a Semicircle or an Arch, or a little Vault, or a Penthouse, joyntly or equally meeting at the top of the Nose, to the end that the Sweat and the Rain might have his course and easie descent on both sides, without flowing or dropping into the Eyes. And least themselves should be any hindrance unto the Eyes, or enter into them: God hath created them and the Hairs on the Eye-lids of such a Nature, that either they grow not at all, or else very little, but abide almost always in the same state, which the Hairs of the Head and Beard do not.

C H A P. III.

Of the Coats and Membranes, or Parchment-like Skins of the Eyes.

Concerning the matter whereof the Eyes are made or composed, it far excelleth all other, whether in respect to the membranes of Parchment-like Skins ; or to the Humours, Nerves, Veins, Arteries, Muscles, or in regard to the glandulous Substance and Kernels whereof they are made. Now because the Humors are thin and moist, Nature hath annexed unto them Membranes or Parchment-skins, which might fitly retain them in their appointed place, for the performing of their Office or Functions. Of these by the industry of the Anatomists there have been found to be five in number. The first Membrane is called in Latin *Adnata*, *Alba*, *Adherens Conjunctiva*, in English, the White of the Eye. This Membrane or Parchment-skin is very thin and slender, serving to contain the Eye in its Circle or Collet : whose beginning is from *Pericranium* ; that is, from the Skin which compasseth the Skull, and his end in the Circle named *Iris*, or the Rainbow : What is called *Iris*, is a Circle in the Eye, representing divers Colours, the Variety and number whereof are not to be judged to proceed from the Humours, but from the Membrane called *Uvea*. For the Humours in all Persons are always of the same Colour, but the Circle named *Iris* is not so ; because in some Men it appeareth more black, in others more white and blue, according to the diversity
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of the Colours which are in the Membrane called *Uvea*. It was named *Iris*, which in English signifieth a Rainbow, because in it do appear such change of Colours, as are often seen in the Rainbow. The second Membrane or Parchment-skin is named *Cornea*, that is, the horny, being more strong and hard, and resembling Horn that is made thin and bright, like unto that of which Lanthorns are made; from the likeness whereof, it seemeth to have got the Name of *Cornea* that is horny. Now God thought fit to ordain it so, that it should be a surer defense to all the Humors of the Eyes, and to help the Light; which the Eyes receive into them, through whose midst it shineth and sendeth out the Light, even as the Candle which is in the Lanthorn casteth its Light toward the Horn whereof the same is made. This horny Membrane is not in every part like unto it self or of the same Contexture; for the former part of it, which we may and do behold: Wherein the Apple of the Eye is placed and environed with *Iris*, or the Rainbow; that part, I say, is bright, and hath a shining Lustre or Light, that so Colours might have the better passage and reception there, but the hindermost part of it is dark, very thick and gross; which made the *Arabians* to distinguish it into two Membranes. It is to be observed, that this Membrane is composed of many little Skins, and as it were thin Barks, or Filaments, which take their rise from the *dura mater*, which is divided into sundry small Skins. The use and office of this Membrane, is to keep the Eye in its round form, by encompassing all the Humours of the same. The third Membrane or Parchment-skin is the *Uvea*, which is in
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English like to a Grape, being so called, because it hath in the outward part the resemblance of a black Grape after it is pressed ; its beginning is from the second Skin, compassing the Brain, called *pia mater*, which after it hath inclosed the Sinew of the sight, named *Nervus opticus*, extends it self under the horny Membrane, ascending unto the Circle *Iris*, and yet does not after enclose the whole Eye. For being come thus far, then leaving the horny Membrane, it maketh the hole for the Apple of the Eye, and bendeth backward to the Circle and large Circumference of the Chrystaline Humour ; unto which it cleaveth fast, staying the waterish humour, that it should not cover and bury the whole Chrystaline Humour. The outward part of it is black, to the end it might gather and heap up within it self the glittering beams, and that the divers kinds of colours might be thereby better united, received, and conjoyned. For as it is the property of white to scatter abroad, so is it the nature of black to gather together. Touching the innermost part of it, it is indued with many colours, that by seeing variety of colours, we might the better judge of them, and be able to distinguish one from another, as they are offered to our sight. Otherwise, if it had been died but with one colour only, then all things which our Eyes do behold, would have appeared like this only colour : even as we see a green or red glass maketh all things appear green or red. Furthermore, this change and diversity of colours refresheth the wearied Eyes in such sort, that before we have viewed and looked on a thing diligently, we stay our Eyes for this purpose, that the Spirits of sight may,

as it were, retire themselves to this diversity of colours, as to a place of recreation and comfort. This Membrane named *Uvea*, is soft, least it might hurt the chrystaline humour, and directly set to the said humour, that the light might have more free entrance, and that by his darkness, the passage of the colours might not be stopped : It is nourished with the Veins and Arteries of the horny Membrane. Now that which is seen on the hole or centre of the Eye, like unto a black prick, is named the Apple of the Eye, by which we see : And albeit it doth appear black, yet is there not any thing underneath it black, but thorowly clear, transparent and bright. The fourth Membrane is named in *Greek* *Amphiblestroides*, which in *English* signifieth a Casting-net, which taketh its beginning from the finew of sight, called *Nervus opticus*, whose Coat is stretched forth, and is a Contexture like to a Net of many Veins and Atteries, which it receiveth from the Membrane *Uvea*, both for nourishment and life, and for the glassy humour wherewith it is cloathed on the hinder part. The fifth is called *Arachnoides*, because it resembleth the Spiders-web, which is in *Greek*, *Arachne*, whose beginning (as some will have it) is from the *Pia mater*, but as others affirm, from the chrystaline humour, to wit, from the superfluous matter and excrement of the same. Its use is to enclose the said humour in all the former part. *Ambrose Pare* tells us concerning one most excellent benefit of the same ; viz. That it serveth to the chrystaline humour, as a Glass ; whereby it falleth out that the divers sorts and kinds of visible things which are sent from any part of an external object, that is, from the thing which is offered

offered to our sight, may be retained in the said humour, by such a conjunction and linking of each to other, as we see in a Looking-glass made of glass and Lead, which hath force and power to stay the outward Face and Image from passing thorow, but holdeth them as it were gathered in one place in the uppermost part or its Surface.

C H A P. IV.

Of the Humours contained in the Eyes.

CONCERNING the Humours contained in the Eye, the first is called *Aqueus*, that is, the *Waterish* or *Aqueous* humour, because it is not unlike water settled in the foremost part of the Eye between the horny Membrane and that which is called the *Uvea*, and some part of the chrystalline humour. It hath the first place, because it might bridle and stay the raging colours which come upon it, and prevent the horny Membrane from pressing down that humour which filleth almost that part of the Eye. *Celsus* hath observed, that between the *Waterish* and *Chrystalline* humour, there is a place as it were empty, being only filled with its bright-shining Spirit, wherein the Cataracts are ingendered, as we will shew in its proper place. There is a further conveniency belonging to this humour to keep by its moisture the chrystalline humour from becoming too dry. The second humour is the chrystalline, so called for the resemblance it hath unto Chrystal in whiteness and transparency, to
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the end it might more easily receive the diversities of colours, as we see only white doth. Its seat is in the midst between the *waterish* and vitreous humour, not only administering nourishment and moisture, and consequently preserving from dryness, but also assisting and preserving the same, and to moderate and appease the rage of Spirits and Colours, which might hurt it. Its form or shape is round, which more easily resisteth outward Injuries: This circular figure being not so easily hurt, because it hath no Corners. It is true, that its rotundity is somewhat depressed and as it were pinched before and behind, but so, as thereby to render it more secure and steadfast in its place, which is somewhat difficult to be in a rotund figure. Again, by this compression, the colours of such things as we see are retained without being dissipated on either side, which otherwise of necessity must have happened had its figure and shape been perfectly circular. It receiveth nourishment from the glassy or nitrous humour, by help of the little Veins and Arteries, which it imparteth unto it. And it is necessarily required, that in the vitreous humour the blood should turn white before it passes to the Chrystalline humour: For if it were nourished with pure blood, it would not be white as is necessarily required: It is given to the Eye as the first instrument of sight, and therefore serves the Eye in the nature of a little transparent Chrystal-glass. And albeit the other humours are also so bright that the light may pass thorow them as it doth thorow water or glass: Notwithstanding this they have no light of themselves, as hath the Chrystalline humour, which could not receive the light which it receiveth outwardly, if it did not
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partake of the same within, and partake of it in such a manner that it agreed naturally with the same. To prove that it is the first Instrument of sight, it is plain, that after it be taken out of the Eye, and laid upon any thing written or printed, it sheweth the Letter twofold greater then it is in it self : And from this observation as it is supposed, Men first learned the use of Spectacles. The third is the glassy or *vitreous* humour, so called, because in his substance and colour, it is like clear transparent glass when it is melted : It is a Concavity in the midst, to the end it might keep the Chrystaline Humour, whereunto it is in place of a Cushion, as the watery or aqueous Humour is placed in the former part of the Eye ; so is this in the hinder part, for this purpose, that it may repress and keep in subjection sometimes the furious Spirits which fall upon the Chrystaline Humour. It is nourished by means of the Veins and Arteries, which spring from the Membrane, called of its form of a Casting Net, *Amphiblestroides*, in greatness it exceeds threefold both the other Membranes.

CHAP. V.

Of the Nerves, Veins, and Arteries of the Eyes.

THe Eyes are indued with two sorts of Nerves or Sinews, whereof the first are called *Optici in Greek, and Visuales in Latin*, which is in *English*, Sinews pertaining to sight, commonly called the *Optick Nerves* whereof either

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Eye hath one proper unto it, which differ from other Sinews, because they are neither of so found and firm a substance, but are soft, and within full of little holes or rather Filaments (albeit this hollownes is not so evident in them that are dead) which are like small Conduit-pipes or *Tubuli*, little Gutters, to carry unto the Eyes the Spirits of sight, which in manner of a little flame do issue from the light, by whose help they receive from the Brain both life and power to see. But before they come to the Eyes, after they are issued from the brain, they join together like as the Iron in a Mill, and make but one only Body and Conduit, whereby the Spirit of Sight is conveyed wholly and joyntly; which is apparent thence that one Eye being closed, the Apple of the other doth so enlarge it self, that by the passage thereof of the whole Spirit, we may see as fully and certainly with one only as with both the Eyes. This Union was necessary, lest, when one thing is offered to our sight, we should have beheld two, to wit, with either Eye one, so that in looking upon one Man, we might suppose to have seen two. After this conjunction and linking together, they are separated again each of them passing through the holes in the Head, and being fixed into either Eye severally, and their course in the Coat or Membrane called *Amphiblestroides*. The second sort of Sinews are those which serve to move the Eye, whereof each Eye hath one; which beginning near unto the aforesaid Sinews, and passing through the holes in the Head, are engrafted into the Muscles of the Eye to procure their Motion. If we respect the Veins, there are two in each Eye; one within derived from

from the Vessels of the brain with the Membranes, and the other without, which is plainly stretched unto the outward parts thereof, and specially to the White of the Eye. From whence proceed oftentimes Inflammations and redness in the Eyes. These help to the nourishment of the Eye, as the Artery serveth to bestow life on the same.

C H A P. VI.

Of the Muscles of the Eyes.

BEcause the Eyes were made to guide the Body, and to discover such things as might outwardly hurt us; they could not conveniently have been fastned in one place, and so look only and continually straight forward: Therefore God hath bestowed upon either of them six Muscles, partly, to hold them fixt and straight in their places, at certain times, and partly, to change their Motions, upward, downward, to the right Hand, to the left, inward and round about, as occasion should require. Four of these Muscles are straight, taking their beginning from the bottom of the Circle, in which the Eye is placed, called *Orbita*, which compassing the Sineu of Sight, do end in the midst of the Eye, that is to say, one in the uppermost part, drawing it towards the Nose, another in the left side, drawing it upward, the third in the lowest part, drawing it downward, the fourth in the right side, drawing it towards the Ear; and when they have accomplished their Action, they

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pluck it inward. The other two turn the Eye, yet not fully, but only on the side, that it might look backward: For there is not any thing to be seen within, but only without the Head. The first is very long and slender, beginning at the bottom of the Circle named *Orbita*, toward the great corner, ending with a thin Tendon, which peirceth through a little Membrane or Skin like unto a Ring, which is made fast near unto the moist Kernel, from which, in weeping, Tears proceed, called commonly *Glandula lachrymalis*; by the which when it hath passed as it were by a pully, it maketh a straight corner going forward, until it be imparted in the uppermost part of the Eye. His Office is to turn it toward the Nose. The sixth beginneth in the lowest part of the Circle *Orbita*, being very slender; it ascendeth toward the little corner, and embracing the whole Eye with a small Tendon, endeth near unto the insertion, or emplanting of the fifth. His Office is to turn the Eye towards the Ear.

C H A P. VII.

Of the Kernels, generally call'd the Glandules of the Eyes.

THere are besides the Fat in the Eyes, three Kernels, called in Latin *Glandula*, one within the Circle, another underneath it, and the third above all; which serve to keep the Eye moist and wet, as shall be expedient, because of their continual motion and hot nature, withholding

holding also the humours, lest by their flowing upon them in two great quantity they should prove hurtful to them. From these Kernels issue out the Tears, either by constriction and compression when we are afflicted at any thing, or by rubbing the Eyes, either by enlarging or extending, as those which shed Tears for joy; either through weakness, as those that weep before Death, because their strength is quite decayed, either from the superfluity of any Humour, as it happens with those that are drunk: either by the sharpness of a Humour, as we may perceive by Smoak, or the Pilling of an Onion. Concerning the third Kernel, it is placed in the great Corner of the Eye, near to the Nose, upon the little bone in the Circle *Orbita*, in which place there is an hole whichth entre into the Eyes on each side, to stay the course of the Excrements coming from the Brain from falling into the Eyes, as we see in such as having the said Kernel changed or consumed, do weep continually, as shall be declared in its proper place, when we shall speak of the Disease called *Fistula lachrymalis*, that is, a continual watering of the Eyes.

C H A P. VIII.

Of the Form, Shape and Figure of the Eyes.

ALL the forenamed parts joyntly together, make up and frame the Eyes in the fashion or shape of a Piramis, *i. e.* of a pointed Spire, whose point turneth inward to the bottom

of the Circle called; *Orbita*. But if we consider every part thereof separated from the Muscles, we shall find them to be in form and shape rotund; which is commonly called sphaerical, being the most excellent and perfect shape of all others, both in regard of its easie and swift motion to the right hand, or to the left, upward or downward, as also in respect it most easily resisteth all outward and foreign Injuries.

B O O K II.

Containing the Diseases incident to the whole Eye.

C H A P. I.

Of the Eye that falleth out of the place, a Disease call'd in Greek Proptosis, and in Latin Prolapsus, expressio or exertio. Also of the Ox Eye, or great Eye, call'd in Greek Exophthalmia, in Latin Oculi prominentia, by the common sort, Goggle-Eye.

Exophthalmia, is a standing out, a lifting up, and, as it were a casting forth of the Eye from the hollownes and circle wherein it is fixt and placed, as a precious Stone is within its Collet. This affection or disposition is sometimes merely natural, as we may see in such as have great Goggle-Eyes, and to those it is not needful to apply any Remedies. But if the Eye do come out more and more, till it be removed wholly out of its natural situation, then it becomes a *Proptosis*. In some it comes forth from its natural Position to such a degree, that it cannot be covered with the Eye-lids, and is in

such a manner removed out of the Circle, that it hangeth without the Bone *Ethmoides*.

This Disease owes its origine either to outward Causes, as from falling from an high place, by a great stroke or contusion on the Head, or about the Eye with a Ball or Stone: It may come also from strangling or choaking, as appears in those which use wrastring: Unto which you may add the violent strainings suffered by Women in hard Travails, and the preternatural stretching of such as are afflicted with the Disease called *Tenesmus*. It is also incident to those that are troubled with grievous vomiting, shortness of Breath, and use blowing in great Horns or Trumpets. The inward causes amongst others, are violent Inflammations and Defluxions falling upon the Eye, and in this case the standing out of the Eye, because of the Inflammation, is called by *Celsus*, *Proptosis*. It may also be caused by an Aposthume in the substance of the Brain, or in the Membranes and Coats which cover the same, and from too much repletion and a flatulency heaped together and ingendred in the Eye, as it happens in a Child which dies and putrifies in the Mothers Womb; and to these may be added the relaxation, and overmuch mollifying of the Muscles and Membranes which move and turn the Eye. According to these different Causes, there are divers Signs whereby the Disease is distinguish'd. For if the Eye falleth out through the abundance of Humours, it appears greater and more swell'd than if it fell out by strangling and choaking, by straining or blowing (if there be no other repletion of Humours) albeit there is in both great protubernacy; but if it arise from a relaxation
and

and tenderneſs of the Muſcles and Membranes, it is not ſo puffed up and ſwelled, yea ſcarce-ly can any ſtretching be perceived.

Touching the general cure, Phlebotomy is abſolutely neceſſary, and in that place, eſpecially where the pain and inflammation appeareth, as alſo Cupping Glaſſes to be apply'd with ſcarri-fying upon the Shoulders and Neck; and if it ſeem needful becauſe of the great abundance of Humours, you may uſe purging, and preſcribe the patient a ſpare Diet. But concerning parti-cular Remedies, as the cauſes are various, ſo muſt the Remedies be accordingly. For if the ſtroke be round, or the Eye in the thruſting out do hang, then firſt of all, let him with his hand put it in-to the place again, preſſing it down gently with his hand; and when it is either wholly or in part thus put again into the place, he muſt lay on it little Stupes made of fine Linnen-cloaths, or ſuch like, wetting them in Roſe-water, Plan-tain-water, and the white of an Egg, or rather make your Medicine of an Egg, Oyl of Roſes and Wine, as *Ætius* preſcribes, or ſome ſuch like.

All theſe Medicines muſt be applied warm; and changed often, leaſt by heating too much, they cauſe a Suppuration; that is, bring it to a ripe matter. After theſe Remedies, let the Eye be kept eaſie in the place which a ſoft Roller, named *Ophthalmos*. After the ſame manner you muſt proceed if the like accident comes from Strangling, Choaking, Strayning, or Vomiting, for the Child which is dead or putrified in the Mothers Womb, when it is brought forth: And if it ſeems convenient, uſe things to mollifie and ſoften the Muſcles and Membranes, which may keep

keep it in its place, then apply a fomentation with an adstringent decoction, made of the Pill of Pomegranate, Shepherds-purse, Endive, Poppy, in order to strengthen the part, and upon it lay a Cataplasme of Bean-flower, Roses, Frankincense, and the white of an Egg. If the Eye seemeth full of vapours, and Hegmatick Humours without any inflammation, there must you use a fomentation and fumigation, to attenuate them before you do undertake the restoring of it into its place, to the end you may attenuate and disperse such Humours as hinder the replacing it into its natural position. But if the Eye falls out through the violence of an Inflammation, you must remove it and allay the pain. For this purpose *Celsus* commends this *Collyrium*.
R. Nardi Indici Juyce of Poppy, *ana* ʒ i. Gum, ʒ. i. Saffron, ʒ. ii. Leaves of fresh Roses ʒiv. seeth them in Rain Water, or Tart Wine. After this pattern you may appoint this prescription. *R. of Spikenard* ʒ. i. Leaves of Roses fresh *P.* i. the Pomegranate Pill ʒ. ii. and seeth them in Rain Water, ʒ. iv. then dissolve therein of the Juice of black Poppy ʒ. i. Saffron ʒ. ʒ. make your *Collyrium*. In it you shall wet Linnen-cloaths, folded together, commonly called Stupes, to be apply'd to the Eyes. They may use also this Cataplasme. *R. of the* Leaves of Poppy and Henbane, *ana*, m, i. Sorrel-leaves and Plantain, *ana*, m, i. ʒ. Red Roses, m, i. seeth them in Water with dried Rayfins, put thereto ʒ. ii. of Myrrhe, and the yolk of one Egg, make it a Cataplasme, and apply it to the Eye. In this case also those Medicines will be very proper, which we shall set down in the Disease called *Ophthalmia*, being the inflammation of the Eyes. But if neither by all these Remedies, nor
rolling,

rolling, the Eye can be restored into the place, but it still remaineth ready to fall out, and seemeth to hang, then it is to be supposed that the sight is lost, and that the Eye is in danger to become dry and withered (because the nourishment is wanting, which should support the parts with their natural moisture) or else to come to suppuration. In this case it is expedient to open the part towards the Temples of the Head, where the suppuration appeareth, to the End that the filthy flegmatick matter being voided, the inflammation and pain may cease: Notwithstanding this, let the Coats thereof remain safe, and put them again into the place, to avoid thereby the deformity which might appear in the Face, using afterward such Medicines as may assuage the pain: Such is the white of an Egg beaten with Rose-water and Plantain. In what place through dryness and withering the Eye may come to perish, least it cause further infection by putrefaction, that which standeth forth is to be cut away. He that intends to go about this Operation must bind thereof as much as is corrupt, filthy, and hanging out, as near unto it as it is possible, and then cut away so much as hangeth over the Ligature or binding, applying in the mean time anodyne Medicines, or such as appease pain and stay inflammation. Tho' *Ætius* would have it delay'd till it come unto suppuration. Now which is the best way to cut it after it is bound, we will declare in the Chapter where we shall speak of the *Staphyloma*.

C H A P. II.

Of the lean, withered, or diminished Eye, call'd in Greek Atrophia, in Latin Imminutio, or Macies oculi: Also of the little Eyes, commonly called pinking Eyes, in Latin Parvus oculus.

A *Tropia ophthalmou* is an affection of the Eye, when all the parts of it are leaner and slenderer than they ought, and the whole Eye smaller and lesser then naturally it should be; whereupon there appeareth an hollow deepness, it being sunk down within the Circle, and the sight being darkned and dimmed in such sort, that the things which they look upon, do seem much greater than they are. This affection differeth from *Pthipsis*, that is the consumption of the Eye, because therein is only a diminishing of the Apple of the Eye, and not of the whole Eye. The inward causes are the Defluxion of sharp and thin Humours into the Eye, continual Tears, accute Fevers, Sadness, old Aches, violent pains in the Head; the outward causes, a great stroke, troublesome cares, watchings, &c. The pinking Eye, is, when any one hath from his Birth so little Eyes, that they seem scarcely opened, albeit they are not sunk within the Circle more then they should be: Whereunto it is not expedient to apply any Medicine, since it is in vain to attempt to amend nature in this case. But to speak of curing the lean Eye, in regard of general Remedies, Exercise is here first of all necessary, next rubbing of the Head and Face,
and

and washing of it, and closing the Eye-lids, and to rub the Eye gently with the Fingers. The Patient must use to eat good nourishing Meat, drink Wine, and be kept free from Cares. Concerning particular Remedies, such are most commendable as are gentle, and assuage pain, as Fomentations of warm Water with a Sponge, to use common Milk warm, or Womans-milk, dropping it into the Eye, to avoid all sharp corrosive Medicines, which may provoke weeping. Notwithstanding P. *Ægineta* used this Rx. *Ammo* 3. i. *Crocomag.* 3. iv. *croci* 3. ij. *erug* 3. j. stamping them in water, and so framing them fitly for this purpose. But it hath been well observed, that he did not this to procure Tears, neither to dry, as such Remedies would do, but rather as it were by tinkling and pricking of it a little, to bring and draw thither the Humours and Spirits, and more plentiful nourishment: which thing is also usually done in other lean parts, when they rub and apply sharp Medicines unto them, pricking also and beating them, to the end they may draw to them more store of Spirits and Blood. Nevertheless *Celsus* rejected the aforesaid Medicines which cause Tears.

C H A P. III.

Of the Bursten and Broken Eye, called in Greek Raxis, in Latin Ruptio.

R *Exis* is taken generally for the separation or dissolution of any fleshy part without a wound: Notwithstanding *Galen* placeth it amongst

amongst the particular affections of the Eyes; affirming it to be a cut or wound made by a stroke, or any other cause in the bottom of the Eye; which suddenly causing a dissolution of the Continuity in the Membranes or Parchment-like Skin, the Humours which govern the sense of Sight are poured out, and scattered abroad. The causes are round strokes upon the Eye, a fall from an high place, a violent motion, stretching and enlarging of the Membranes, which being broken, are not able to contain the Humours in their natural place, whereupon it cometh to pass, that all the Eye bursteth, and the Humours flow out. It cannot be cured, considering the Humours are issued forth, and the Membranes remain dry: notwithstanding some will constantly avouch, the aforesaid Humours may be engendred again. To prove this assertion, they alledge the experiment made on a Pigeons Eyes, whereof they crushed forth the Humours, which nevertheless in fifteen days they have bin found recovered, and restored, and the Eyes as plain and sound as before; which I am able to testifie by my own ocular experience; but it is not, nor has ever been proved true in any Man. Indeed *Galen* reports a History not only extraordinary, but rather incredible, of a young Boy, who being pricked directly upon the Apple of the Eye, the watrish or aqueous Humour issued forth immediately, by means whereof the Substance of the Apple of the Eye being much diminished, the horny Membrane stood forth and appeared corrugated: Notwithstanding all this, he was healed, and restored to perfect sight, the Humour being engendred again, which had before flowed out
and

and perished. This accident might befall to the waterish Humour, because it is nothing else but an excrement of the nourishment, which is in the Cryſtaline, and not any part of Seed, as the glaſſy and aforenamed Chriſtaline are, whoſe decay in this reſpect is deſperate and unrecoverable. For my part I have ſeen much of the wateriſh Humour iſſue forth, when the Needle hath been plucked forth, which was thruſt in, to take away the Cataracts, and afterward in a ſhort time the Eye hath been as full, large and fair, as at the beginning; which could not be ſo, if all the Humours were loſt. Therefore the Chirurgeon ſhall be contented with aſſwaging the pain, which he may accompliſh, partly by general Remedies, as blood-letting, cuppings on the Shoulders, to prevent Inflammation and Deſluxion of Humours; partly by particular applications, and before all the reſt, with this Eye ſalve of moſt ſingular virtue and of an eaſie Preparation, which is the blood of a Pigeon hot, wherein dipping a Linnen-cloth, apply it to the Eye, the reſt of the Cure being to be ordered according to the difference of the Symptoms.

C H A P. IV.

Of the Eye which is troubled or confusedly mixed and put out of order, called in Greek, Synchisis and in Latin, Inflatio oculi.

S*ynchisis*, is a breaking or cutting of the Eye, occasioned by a stroke, or by an inward accident in the innermost Membranes, with a dispersing or overturning of the Humours and alteration of the Apple of the Eye, which in the beginning appears very large, but in the end much less than whilst in its natural State. The Humours of the Eye in like manner don't remain in their natural position, neither keep their appointed order, but are carried two and fro and mingled together without any regular distinction. This malady ariseth after a great stroke or inflammation of the Membrane, named *Uvea*, because some part of it is broken. Those are more easily cured, which have the Apple of the Eye only enlarged, retaining still his colour and Figure, than such as have it rent, and as it were cut asunder. The cure must be undertaken in this order: If the mixture and confusion of Humours came by a stroke, first let the corrupt Blood be quickly taken away, then fill up the Eye with the Blood of a Turtle or Pigeon very hot, and upon it lay a Stupe (as it is commonly named) of Linnen-cloth, or Wooll wetted in the white of an Egg, and Oyl of Roses beaten together, continuing the use of it, for the space of two days, or more if need require. On the third day you must

must use a Fomentation, dropping into the Eye warm Milk, or Womans Milk, and afterward apply a Medicine made of the yolks of Eggs hard roasted, mingled with Honey, and a little Saffron to cleanse the part. In the rest of your cure, you shall have in readiness proper Medicines to obviate all manner of Symptoms.

C H A P. V.

Of the Eye which is swoln, and puffed up, called in Greek, Oedema opthalmou, in Latin, Inflatio oculi.

O*Edema* is taken in ancient writers, for all kinds of flatulent watery Tumors or swelling in any part of the Body ; but here we use it particularly, according to *Galen*, for a blowing or puffing up of the Eye, when it is lifted up on high, loseth his natural colour and, in a great measure, its motion also, the white part being lifted up higher than the black : Or, as *Ætius* would have it, when the Eye (without any manifest cause) becometh puffed up, swoln, and discoloured, through the Defluxion of sharp thin Humours which produce and Itching. Others say, that swelling of the Eye which is termed *Oedema*, is taken only for the Tumour which outwardly ariseth in the Eye-lid. This affect happeneth many times to Men ; the Itching beginneth at the corner of the Eye, not unlike to that, when one is stinged by a Bee or Gnat: This Disease is more frequent in Summer, than other times of the Year. The causes, are the De-
E fluxion

fluxion of sharp waterish Humours upon it, or Vapours rising from the entrails, ascending to the Head, which afterward fall down upon the Eye, and chiefly upon the white of it, called, *Conjunctiva*, which being not so solid and hard, as the horny Membrane, doth sooner suck in, and as it were, drink up, the aforesaid Vapours and Humours, which cause it to be raised above the horny Membrane. In the Cure of this Disease, we must have a regard to the antecedent cause to remove it by frictions, or rubbings on the Neck, Back, and Arms, by cupping upon the Shoulders, by good Diet, by avoiding all Meats which send up Vapours to the Head, and principally strong Wines. In particular, you must use partly discutient, partly strengthening fomentations, applying them with a Sponge, according to the direction of *Ætius*. Take of Flowers of Camomil and Melilot *an.* p. i. red Roses, p. ij. Sage and Betonie *Ana* p. i. of Fenne-greek, Anise, Fennel, Line-seeds *Ana* z iij seeth them in equal portions of Tart Wine and Spring Water, apply it with a Sponge. You may also apply to the Eye, this Eye-salve. Take of the mucilage of Lin-seed, and Fenne-greek, drawn with Water of Eye-bright z. ij. Fennell-water, and Rose-water *an.* z. i. wherein dissolve of Myrrh and Aloes *an* z ss. Tutia prepared z. i. and with this make your Salve. The *Conjunctiva* or white of the Eye is sometimes swell'd to such a degree, that it protuberates out of the Eye-lids, and is red and shining, which some out of ignorance would have cut. But you must beware of such rash Counsels, since by little and little, the aforenamed Remedies will bring it to its own proper natural Station, as I have seen it accomplished contrary to
some

some Mens opinions. But if this thing cannot speedily be performed, then the Chirurgeon must put it gently and easily into the place, with the point of a round Prop; which some have been constrained to do, the white of the Eye standing and stretching beyond the Eye-lids.

C H A P. VI.

Of the inflamed burning Eye, or Carbuncle in the Eye, called in Greek, Anthracosis opthalmou, in Latin, Carbunculatio.

A *Nthracosis* in a general sense, is a hard, crusty, fretting Ulcer, with flowing of Humours and swelling, arising in any part of the Body, but specially in the Eyes, about the beginning of pestilent Fevers, hurting not only the Eye, but also the Eye-lids. It happeneth sometimes through great inflammation, or rather by melancholy Blood, fermenting and settling in that place. *Ætius* giveth us these signs; there arises a little Tumour like unto a Barley-corn, red in the beginning, in such manner, that the sick party, thinks his Eye all on Fire, tho' the Tumour is not much swell'd; for by reason of the great heat, it openeth it self and bursteth out, and that which runneth out of it, albeit it be sharp and biting, causeth the top of the Carbuncle to be dry and crusty. It infects the parts adjoining, whereupon ensueth a great inflammation in the Eye, in the adjacent parts and in the kernels commonly called *Glandyles*, which are under

the Ear. Sometime it produces great rents and Exulceration in the Eye, makes the hairs fall off and the Eye-lids bare. In the general Cure, both of that which is in the Eye, and the other on the Eye-lids, it is expedient that the Patient eat little meat, be let Blood, and use glisters. For outward Remedies to be applied to the place affected, if the Carbuncle be on the Eye-lids, *Ætius* commends a Composition made of Coriander and Night-shade, beaten together with dried Rayfins, and laid to the Carbuncle. If the Carbuncle grow broader; apply a fomentation to the Eye, of Rose and Vine-leaves. It will not be amiss if you stay the said Carbuncle, with laying on it *Oleum vitrioli*, in little quantity, and softly touching it with it. But if the Carbuncle begin in the Eye, the most excellent course is, to wash and cleanse the Eye with Milk, and to seeth together in Water, Honey, and Bean-flower, or the best wheaten Flower, which you must apply like a Cataplasm, and sometime bruise to Powder the Root of the Flower-deluce, and lay on it. Against the great inflammation, the mucilage of Flea-seed, Quince-seed, made with Rose-water, is wonderfully commended; and in place of Rose-water, you may take Plantain Water, or Milk. If the Disease creep farther, Lentiles boiled with Honey are singular, and if it continues, Olive-leaves, or the pulp of the Pomegranates sodden in Wine, then dried, and afterward mingled together with Honey, are most excellent. Now when you find the Disease to stop, and that the Crusts are ready to fall off, use this Medicine, made of the yolk of an Egg hard roasted, and beaten with a little Honey and Saffron, using it till it be fully healed; or rather Oyl of Eggs mingled

mingled with a little Venice Turpentine, and a little Oyl of Saint-Johns Wort; or else some common cleansing Medicines.

C H A P. VII.

Of the moist, running, or weeping Eye, called in Greek, Rheuma opthalmou, in Latin, Fluxus oculi, delacrymatio.

R*heuma opthalmou*, is an involuntary defluxion of thin Humours into the Eyes, very difficult to be stopt. To some it is natural, as we see some from their Childhood never to have dry but always moist Eyes, with a thin piercing Humour, and always painful. It often produces an inflammation, and blearedness, in many tormenting them all their life, without admitting any Cure. Those which have large and gross Heads, are most subject to it, and scarcely doth any Medicine at any time prevail there. It may also arise from some outward causes, as from a Fever, from some Medicine, or sharp thing put into the Eye, or fallen into it, from a great weakness either of the retentive or of the digestive faculty which gives nourishment to the Eye, by the unskilfulness of the Chirurgeon; as I knew one, who in Curing the Disease of the Eye called *Ungula*, did cut away more of the Flesh in the corner of the Eye than he ought, whereof we will speak in its proper place. Concerning the cure, the Chirurgeon must have recourse to some Medicines set down in the beginning, which are most easie and gentle;

and these are either general or special. The general ones are, his manner of Diet; which must be of such things as have a thickning quality, (since the Humour is thin) and sharp purgations, Phlebotomy, Frictions downward, and Viscatories are useful; and this to be done with the advice of a Learned Physician. For the particular Cure, if it be occasioned through the use of any sharp Medicine, or by any external thing falling and fastned in the Eye, let him abstain from the aforesaid Remedies, until that be removed which vexeth and molesteth the Eye, otherwise the patient will never be at rest: Which being done, he may use the before mentioned Remedies. If it proceed from a continual course and defluxion of Humours, you must apply adstringent and binding Plaisters to the Head, after it be shaved, and to the Forehead and Temples, as *R. Emplast. contra rupt. & unguent. de bol. ana. ℥ i. ss* melt them together, and make a plaister for your use, or *R. Unguent. de sicc. rub. & comitiss. an. ℥ ij. Mastich. ℥ ss.* mix them for your use. To the Eye, you must lay Plaisters which are comfortable, and somewhat binding, that thereby the Eye may be strengthened and armed against the defluxion of the Humours. *Ætius* doth much commend this Eye-salve, which produces neither pain nor heat. *R. Aeris ust. ℥ iiij. Cadmia ℥ iiij. Opii, Myrrh ana. ℥ iiij. Acacia, gum arab. ana. ℥ vij. ss* put them into Water: of these or the like you may make a Salve, and when you will use it, put it into the Eye, and let him shut his Eye a little while, and so keep it in; whereby it cannot occasion much pain, as the Author himself affirmeth. If all the former Remedies will not prevail, you must have

have recourse to an incision of the Veins and Arteries of the Head and Temples, which draweth out the Humour, if it flow inward, and cutteth off the course of it, if it be outward. For the better perfecting of this work, let the diseased party be set on a Bed, or in a Chair, bind his Neck with a Towel tied about it, writhing both ends together, that being straight, it may press his Neck very close: Let him keep in his breath a short time, that thereby the Veins and Arteries may swell, and appear more plainly: For by this means, the Blood and Spirits will rise up, and fill the Veins and Arteries. Then with your Lancet open where you will, making no larger an Orifice than you do in common Phlebotomy: take away as much Blood as shall be expedient; which, that it may come forth more speedily, make straighter sometimes your Towel: When the Patient has bled sufficiently, the Roller or Towel shall be taken from his Neck, and put to the Orifice, or opening of the Vein or Artery, a little burnt Linnen-cloth, or scraped Lint, lay upon that a Plaister Agglutinative, that is, which hath a vertue to knit and joyn together, upon that, lay a thick folded Linnen-cloth, to the end that the Band or Roller may, with greater ease, keep fast the Vein or Artery. Some use only a little dry Linnen-cloth, wrapped together as they do in common Phlebotomy in the Arm. According to the opinion of the old Physicians we ought to fear the Artery, lest the Blood may not be stayed: but I have always stopt it by this binding, without any further pain to the sick party. Oftentimes, the opening of a Vein or Artery, and the voiding of Blood thence, is alone not sufficient to heal and help



this Malady, because they are filled again with new matter, which causes new defluxions. In this case the Antient Writers advise to cut the Vessel assunder, that by this means you may break the course, and stop the Flux of the Humours; and afterwards it will not be improper or unprofitable to sear it, or rather to bind it above, and below, as is commonly done in the Veins called, *Varicas*, which will be a Bar to the whole passage of the Humours. But after all this, I advise you to apply a searing Iron to the Arm of the sick party, thereby or any other means to make an issue to this matter, which might otherwise perhaps fall upon some other part, namely, the Lungs.

C H A P. VIII.

Of certain Diseases, assign'd by the Ancients to the whole Eye: And first, of such as see best downward, or things that are near them, commonly called, Pore-blind, in Greek, Myopiasis, Myopia, Catopsis, in Latin, Lusciopitas, Misciotas, propinqua visio.

M*Topiasis, Myopia, Catopsis*, is when one cannot see any thing, except it be very near unto the Eyes, and that with great difficulty, but scarce those which are afar off. Those that labour under that defect, are constrained when they read to look very nigh, imagining oftentimes that they behold little Bodies, like Flies or Motes which fly in the Air, as we see it happeneth

peneth to those, that have looked very long and attentively on their Books; or have viewed any thing very diligently. This affection, although it be in some *natural*, yet it *proceedeth also from the small quantity and weakness of the Spirits of Sight*. But *Aristotle* imputes the Cause, to the great quantity of Spirits: Little Children, says he, are most subject unto it, by reason of the Moisture of their Brain: In like manner, those which have black Eyes are more moist, as on the contrary, the like is seen in old Men, because of their dryness: They which have blue or gray, or sky-coloured Eyes, are subject to the Disease *Glaucoma*, which hath the same Cause from dryness, that the Membrane *Uvea* hath from moisture, if we may thus compare one with another. The reason why some see better near, than far off, saith the same Philosopher, proceeds from the situation of the Eye. For such as have them standing forth, cannot see far; and on the contrary, those that have them sunk within their Circles, do more easily discern things, because the Spirits cannot be so easily scattered, when the Eye is settled deeply, as when it standeth out. Concerning the Cure, the old Physicians account it incurable, if it ariseth from the want of Spirits, or is naturally incident unto Men, yet since it proceedeth also sometimes from too much Moisture, my Advice is to use Cuppings upon the Shoulders and Neck, to purge the Patient with such Medicines as cleanse the Brain, to dry up the Moisture in the Head, with quilted Bags and Coifes made for this purpose, to apply a Seton, or rather a Vesicatory, either upon the hinder-part of the Head, or upon the Arms. And touch-

touching other Medicines, which are to be applied to the place affected, you shall have recourse to the Chapter following ; which treats of the dimness or the diminution of the Sight ; and for the rest to order such Remedies, as may strengthen and repair the decayed and dispersed Spirits.

C H A P. IX.

Of the continual dimness, diminution or abolition of the Sight, called in Greek, Amblyopia, in Latin, Hebitudo or Caligatio.

Amblyopia, is a continual dimness and hinderance of the sight, without any appearance of any thing in the Eye : Notwithstanding which, the Sight is darkned, and yet no hurt to be perceived in the Membranes, neither appeareth the Apple of the Eye, either lesser or larger, or affected with any other disorder. This Disease happeneth either when the Spirits are gross or the Membranes very thick and straight, or the Humours of the Eye are not only gross, but also viscous. It proceedeth from some long Disease, and trouble which has wasted the Spirits : It may come also by Age. For old People, besides the thickness of the Membranes and Humours, have their Spirits of Sight much weakned, and, by degrees diminished and lost. In the general cure of dimness, caused through the grossness of Membranes, Spirits and Humours, you must proceed as in the beginning of the Cataracts : And touching

touching particular Remedies to be applied in any kind of the diminution or abolition of the sight, this *Collyrium* is exceedingly commended, having restored (as a certain Author says) sight to one that had been blind for the space of nine Years. ℞. *succi apij. fœnic. verbas. chamedr. pimpinel. cariophil. salvia. chelidon. ruta. centinod. morsus gall. farina. ana. ℥i. piperis crasso modo contusi, nucis moschatæ, ligni aloes ana. ℥iij.* let them all steep in the Urine of a sound Child, and a pint of Malmsey, one Hour; then seeth them a little while; afterward strain them, and put the Water into a Glass, stopping it very close: Put some of this Water into the Patient's Eyes when he goes to sleep. In the same manner, put Strawberries into sweet Wine, and boil them together a short time; of this take every Morning, and of the same make a drink to be used with your Meat. Others esteem the following Water as miraculous. They bury Vipers in Dung, whereof are ingendered Worms, those they distil, and put this Water into the Eyes. The distilling of white Honey and Rose-flowers is of most singular vertue. *Leonellus Faventius* saith, he cured such a Disease, by dropping into the Eye the juyce of the Celandine, and that he also try'd another Remedy, viz. Take of water which runneth thro' a Vein of white Earth, after you have opened the Earth, one pint, and put into it the quantity of a Nut of Amber beaten to gross Powder, let it stand eight Days in the Sun, afterward put thereof into the Eye. Besides the before-mentioned causes, *Avicen* saith, the decay of sight may be produced many times by great light or whiteness, as when one doth a long time look upon the Sun, or upon Snow, and especially

especially if you come out of a dark place : so that you cannot see but such things as are near, and those not without difficulty ; as they which look upon any colour, suppose they behold some white thing above them : He calls this affection, *Altumar*, that is, in Latin, *Albedo vincens*, in English, too much whiteness. *Galen* mentions it in his Tenth Book of the use of the Parts. This Disease falls on those that are shut up in a dark Place, as in Dungeons or Prisons, and come out suddenly into the Light. Some are of opinion, that the *Christaline* Humour being weakned and hurt, is turned upside down, as if it were out of the place, by the meeting and encountering with this great and sudden Light; and therefore this Disease is called in Greek, *Acatastasia Christalloidous*. The patient must look upon Green and Blue Colours, and be kept in a place neither too light nor too dark. *Avicenn* recommends Fumigations made with Wine poured upon a Brick, or rather a Decoction made with Herbs, of a resolute quality, as Hyssop, Melilot, Cammomil, Sage, Rosemary, and such like: Whereof you may prepare also little fomentations : as ℞. of the Leaves of Sage, Majoram, Hyssop, ana. m. ℥ss Betony, Eyebright An. M. i. of Leaves of Cammomil, Melilot, Roses, ana. p. ℥ss of Anni-seeds and Fenel ana. 3℥ss seeth them in Wine and Water, equal parts to be applyed with a Sponge, and make this your *Collyrium*, ℞. of Water of Celandine and Eyebright ana. 3i. Water of Hyssop 3℥ss. in which dissolve Myrrh 3℥ss Benzoin, Stirac. Calamitæ, ana. ʒij. after you have used your Fomentation, apply this to the part.

C H A P. X.

Of those who see not in the Night ; which Disease may be called Night blindness, in Greek, Nictalopiasis, in Latin, Nocturna, or Vespertina Cæcitus.

N*ictalopiasis* is, when one seeth nothing in the Night, tho' he sees most clearly in the Day, and in such a sort, that as the Day declines, so his sight faileth. This Disease proceeds from the weakness of the Head, and grossness of the Spirits of Sight, as also from the Humours and Coats of the Eyes, and principally of the *Cornea* or Horny Membrane, which are broken and stuffed with a thick viscid juyce: Or as *Actuarius* will have it, proceeds from the impurity and superfluity of Humours, which being enlightned by the brightness and clearness of the Air, is able to administer sight, but being obscured and made gross by the shadow and darkness of the Night, it disturbeth and overthroweth the whole Action of sight. To this place may be referred that disorderly affection, called by some, *Acies solaris*, or *Solana visio* ; that is, when one cannot discern any thing, but by the Sun-beams. In the Cure thereof, these general Heads are to be observed, *viz.* Phlebotomy in the Arm, and corner of the Eyes, and Purgings, according to the Physicians advice: This done, make use of Snuff or other Sternutatories. Some recommend the use of *Celandine* and Eyebright water in Drink. Concerning external Medicines, *Avicen* avoucheth this experiment:

experiment : Take the thin moisture issuing out of a Goats Liver, laid on burning Coals mixt with a little Salt and long Pepper. *Ætius* extols the Liver of a He-Goat roasted with Salt, to be eaten, and to put the Liquor issuing from it into the Eyes, or rather whilst it is a roasting, to receive into the Eyes the vapour arising from it. The gall of a Vulture or any other ravenous Bird, mixed with a little juyce of a Pigg and Honey, is much praised, as also the juice of Chickweed or of Fenriell, dropped into the Eye. Also to receive the Vapour of Rue, Fennel, Eyebright, Celandine, Lignum Aloes, Saffron, sodden together in Wine or Water, or else to distill them with Honey, and put the water into the Eyes.

C H A P. XI.

Of Day-blindness, or Cats-eyes, called in Greek, Hemeralopia, in Latin, Nocturna visio.

H*emeralopia* is, when one seeth better in the Night than in the Day ; but if the Moon shine, he cannot see : This Disease proceeds either from the thinness and small quantity of the Spirits of the sight, which are dispersed by the light of the Sun, as on the contrary, they are made strong, thick and contracted by darkness : or rather because the Membranes of the Eye are over-slender, whereby the Spirits cannot be retained, but penetrate and pierce through them. We may refer to this place the Disease, called by

by the Latins, *Tenebrosa affectio*, which is, when one with great pain beholds the light, though it be but very little. Concerning the Cure, due regard must be had, that the Sick party use a very good Diet, to procure store of Blood, and thick strong Spirits; if this Disease owed its cause to want or thinness of Spirits. But if it proceeds from the weakness and slenderness of the Membranes, let the Eye be comforted and strengthened with Medicines agreeable to this purpose, such as may thicken the Spirits, as *R. gal- lar. balauft, ana. ʒ i. foliorum plantag. betonicæ, an. m. ʒs* seeth them in *ʒ. iiij.* of sharp Wine, in which dissolve *Acatia gum. trag. aloes, an ʒ ʒs* make your *Collyrium*. Another *R. rosar. rub. fruct. oxian. tapsi barbati centinod. ana. p. ʒs* seeth them in Water, until it come to *ʒiv.* put into it *Sarcocol* dissolved in Womans Milk which giveth suck *ʒs Tutia preparat. cerussa lota, an- timony loti, ana. ʒ i.* or a *Collyrium* made of half a dram of *Oleum vitrioli*, dissolved in Plantain and Rose-water is singular.

B O O K III.

*Containing the Diseases of the Muscles
of the Eyes, by some referred to the
whole Eye.*

C H A P. I.

Of the Squint-Eye, called in Greek, Strabismus, in Latin, Strabositas, or oculi distortio.

S*trabismus* is a wresting or distortion, which draweth the sight unequally, or a convulsion and distortion of the Muscles, which move the Eye, or when some Muscles of the Eye are loosed, and those opposite to them shortned, in such sort that it is drawn either upward or downward, to the right, or to the left side. For some time in the same part are contrary Muscles equal in number, bulk and strength; so that if some of them be subject to a Palsey, a Convulsion falleth upon the opposite one. Aged People many times by drawing back of the Muscles, are subject to this Disease, or the like affection, as those likewise who have been afflicted with any violent Disease of the Head, as the falling-sickness, giddiness and such like. I have
seen

seen it proceed in some, from keeping too much Company with Women, the excess whereof strangely dissipates the Spirits. But most commonly this distemper is most incident unto Children presently after their Birth, through the Negligence of the Nurses, who set the Cradle, in which the Infant lieth, side-ways to the light, and not directly contrary unto it, which maketh the Children looking towards the light, to turn the Eye on that side towards it; and thus by continuance they are accustomed to turn the Eye awry, till the Muscles have contracted a habit, because one sort of them so obeying and following the opposite one so as to draw them till these do grow longer and the others shorter. As to the Cure, if the Disease proceeds from Repletion, Softness and a Palsey in some Muscles, it will be necessary to purge the Brain, wherein the precedent cause of this Disease was contained; to which purpose also let him chew things in his Mouth and put Sternutatories into his Nose, use a good Diet, and strengthen the part as much as may be with drying and resolving Fomentations. But if on the contrary, it is engendred by too much want and emptiness of the Blood and Spirits, the sick party must be nourished very well, and take to the use of Asses Milk. The particular Remedies must be Fomentations of a moist nature; and the Blood of a Turtle or Pigeon dropped into the Eye is very good. *Paulus Aegineta* appoints a mask for such as have this Disease, to the end they may look always straight forwards; this is most proper for young Children. The Portraiture with the description thereof is extant in *Ambrose Pare* his Book; who very ingeniously has invent-

F ed

ed the said Mask and Instrument, as he has done many other good things, through the long observation he had made in many Diseases. Moreover the Nurse shall frequently draw her Hand over the Childs Eyes to repair the distorted sight. According to the Advice of the Old Writers, some red thing must be fastned on the Temples, or on the contrary Ear to the turning awry of the Eye, that the Child may turn the Eye that way, and so amend the deformed sight. In like manner the Cradle shall be set with the contrary side to the light.

C H A P. II.

Of the shaking Eye, or Horse-Eye, called in Greek Hippos, in Latin, Equus.

H*ippos*, is a preternatural affection of the Eye, equal with its first framing, and from the Birth of the party, wherein the Eyes cannot abide in one place, but are always shaking, and continually trembling, in such a manner that you may behold the Eye going hither and thither without any rest. This affection (as *Galen* says) cometh by the default of the Muscle which keeps fast the Eye, compassing the lowest part of the sinew of sight or optick Nerve yet our modern Anatomists have not found this Muscle in Men, neither have I ever observed it, tho' in Oxen it is most evident. Therefore I judge the cause of this trembling to proceed not from the weakness of one, but rather of all the Muscles. The same Author compares it to the
natural

natural grinding or gnashing of Teeth, which is from our Nativity : Wherefore *Gorræus*, accounts it not a Disease, because no Physicians hath set down any Cure for it.

Nevertheless, in labouring to redress this fault : I would use the Instrument called a Mask, whereof we have spoken in the preceding Chapter, to the end, that such as were infected therewith, may not see but thro' that little hole, whereby the Eye is compelled to stay in that place in looking ; which might cause it to remain afterward stedfast in the same place. Some think it most convenient to bind or roll the Eyes for a short time, and again to unroll them, which may be profitable in this Affection, as also in the Squint-eye.

C H A P. III.

Of the Senseless Eye, or Palsie in the Eye, called in Greek, Paralysis ophthalmou, in Latin, Resolutio oculi.

P*aralysis* is taken for want of sense and Motion in the whole Bcdy, or in any part, as we see in the Eye, when it can neither be moved to the right nor to the left, up nor down, because the Muscles are benumbed ; and if any sharp Remedy be applyed to it, it remains nevertheless insensible. The causes are the Fluxion of the Humours, and especially of Flegm, which fall upon the second Pair of the sinews coming from the Brain, which spread forth their Branches into the Muscles of the Eye. If the whole Eye be
F 2 loosed,

loosed, it is hardly cureable, especially in old People: If it be natural, it is utterly incurable. Where there is any hope, you must do as followeth: The sick must avoid strong Wines, vaporous and gross Meats, using such only, as are of an easie digestion and attenuate the Humours: If the party be of a good Constitution, he must be let Blood in the Arm; afterwards being prepared with Clusters, he must be purged; after this let him use to chew certain proper Remedies in his Mouth, and put Sternutatories into his Nose to draw down the matter, and take a Vomit fasting, but let it be a gentle one, and the Eye to be bound up, lest it might start forth through the vehemency of the Vomiting. You must also apply Cupping-glasses on the Shoulders, with Scarification, and apply Leaches to the Temples. Let his Head be shaven, make an embrocation of *Oxirodinum*, wherein a little *Castoreum* is dissolved. In the particular Cure the Eye must be fomented with such Herbs as are proficuous to the sinews, of a strengthening and attenuating quality; let a Plaister or Cataplasme be apply'd to it, made of the same Herbs, adding to it a little *Castoreum*, but take care it do not touch the Eyes. Then the water of Fennel, Annis-seeds, Cinnamon, Eye-bright mixed together, and dropped into the Eye in small quantity, are of singular use; and so is the Blood of a Turtle or Pigeon.

B O O K IV.

*Containing the Diseases incident to the
Eye-lids.*

C H A P. I.

*Of the blowing or puffing up of the Eye-lids,
call'd in Greek, Emphifema opthalmou,
in Latin, Inflatio.*

E*mphifema* is taken generally for a Congeries of flatulent Spirits, gathered in the empty places of any part, as appeareth from *Galen*. But here it is particularly used for the puffing up of the uppermost Eye-lid when it is lifted up, losing its natural Colour with a heaviness and difficult Motion, and in the end becomes pale and wan: Sometimes the white doth in part stand higher than the black. There is also a loose swelling without it, round about which being pressed down with the Fingers, is suddenly stay'd, but presently is filled up again. And herein it differeth from the tumor called *Oedema*, which being pressed with the Finger, the Mark and Sign thereof remaineth afterward. It proceeds also from a stroke which compassed the Eye-lids. This Disease proceeds from some

thick Humour or Vapour arising from the defect of Heat, which is not able to alter the Blood to the likeness of the part, whereupon either windy or thick Spirits are engendered, such as cannot be dissipated nor digested, as we see it happen to such as are sick of Feavers, or as watch much and sleep little, or as have an ill habit of Body, or are entering into a Dropsie. In the cure of it, you must use Medicines appropriated to the whole Body, and particularly you may apply Fomentations, partly strengthening, partly resolving. *Paulus* doth much commend a Fomentation of Wine and Water, Lentils and Roses boil'd together, or this, *R. ros. rub. P j. Flor. anthos, P ss. Camomil. melilot. hyssop. absinthii, pulgeii, origani ana. m ss.* Seeth them in equal Portions of Wine and Water, and apply it with a Sponge. Afterward you may lay upon it *Vigoes* Plaister, *sine merc. or de baccis lauri, meliloto.* I have tried *Unguentum desiccativum rub and commitiss.* mixed together to dissolve such Tumors. *Ætius* recommends a Cataplasm made of Lentils sodden with a little Honey. Now this affect is oftentimes followed by a Heaviness of the Eye-lids, called by *Avicen*, *gravitas palpebræ*, when the thinner part is dissolved, or rather when there is a weakness in the part, or when it dryeth up or consumeth. In curing of this, there must be used contrary Medicines to the former, of a moistning and softning quality; as Fomentations of Mallows, Holyhock, Pellitory of the Wall, Branch Ursine, Mucilage of Fennegreek and Line-seed: of these also may be made Cataplasms. *Emplastrum de mucilaginibus*, and that of *Vigo* aforementioned, have singular Vertue to molifie and dissolve.

C H A P. II.

Of the Tettar, Ringworm, or Scabs on the Eye-lids, or sharp flegmatick blearedness, call'd in Greek, Pforopthalmia, in Latin, Lippitudo pruriginosa.

Pforopthalmia is, when the Eye-lids are red, and salt-biting Tears issue from thence, the corners of the Eyes being vicerated and red, with much itching. This proceeds from salt sharp flegm, flowing down to the Eye, which occasions this itching and fretting. To cure it, you must alter the course of the Humour by blood-letting, cupping and rubbing on the Shoulders, and abstaining from all salt flegmatick Meats. In particular, you must use Fomentations *ex lenticula decocto, & rosarum*, afterwards apply *collyrium Philoxeni*, called by *Ætius Achariston*, because the Patient is not able sufficiently to requite it; its composition is thus: *R. cadmia 3 ij. chalcitidis cruda 3i. aloes, obol. ij. ærug. obol. ij. piperis gran x florum rosarum 3. iij.* beat them together for use. My advice is to add to them *ung. pomat.* to bring them to a proper and commodious consistency for your use, as is *unguentum de tutia*, and then to put some of it into the Corners of the Eyes. Against the itching, after you have applied your Fomentations, use this *collyrium*: Take Rose-water and Plantain-water. *ana. 3. ij.* in which boil with a gentle Fire *aloes hepaticæ 3ss.* of white Coperise *3. ij.* of Sugar-candy *3. j.* this Eye-salve consumeth and drieth the sharp Flegm and giveth strength to the Eye.

C H A P. III.

Of the Itching or Ring-worm, or Blearedness of the Eyes, called in Greek, Xerophthalmia, in Latin, Arida lippitudo.

X*Xerophthalmia*, is a dry blearedness, wherein the Eyes are neither puffed up, nor send forth Tears, but are only red and heavy with pain, and in the Night the Eye-lids stick fast, as if they were glewed together with a thick Flegm. This Disease is of a long continuance, because the matter is tough and heavy. For the Cure hereof, bathing is most proper and good Diet, and particularly such Medicines as provoke Tears, to the end to draw the moisture to the Eyes, whereunto serveth the Plaister of *Ætius*, named *Achoriston*. This Remedy is greatly praised by *Celsus*: Take Bread dipped in Wine and apply it to the Eye. For if there be any Humour, it draweth it forth, and checks the Defluxion of other Humours unto it. Now whereas they which labour under this infirmity are grievously vexed in the Mornings, not being able to open their Eyes, because their Eye-lids are so fast glewed, they must at Night, when they go to Bed, anoint them with *unguentum de tutia*, which will hinder the Eye-lids from sticking together.

C H A P. IV.

Of the hardness of the Eye, or hard blearedness, called in Greek, Sclerophthalmia, in Latin, Lippitudo dura, or Siccitas oculi.

S*clerophthalmia* is, when the Eye-lids are more hard than ordinary, and also the Eye appears more slow in its motion, more red, more painful, especially when one awaketh, the Eye-lids can hardly be opened, yet no moisture issueth from them, and in the Corners of the Eyes sticketh some Flegm, dried and knotted together : And when we would turn the Eye-lid, we cannot do it without difficulty, because of the great hardness, neither can we shut it without Pain. This effect happens by the Defluxion of a gross Humour, or after a great Inflammation of the Eye, when the Humour is dried, either of it self, or by the heat ; it sometimes happens through the default of the Chyrurgion, who hath applyed over drying Medicines. For the Cure hereof, the same Remedies are very convenient, which were before prescribed for the dry Blearedness, since they only differ in degrees, the one and the other being dry. *Avicen* recommends highly the following Remedies, *viz.* to apply a Fomentation unto the Eye, with Spunges wetted in warm Water, and after, to put upon the Eye the white of an Egg, with Oyl of Roses. And where the Humour is thick and very Salt, he useth the Mucilage of Fenne-greek drawn in Milk and such Remedies as are qualified to disperse
and

and mollifie such an Humour. For my part, I have oftentimes tryed *unguentum rosatum Mesue*, anointing the Eyes with it, both within and without, especially at Night when the Patient goes to his rest.

C H A P. V.

Of the decay or falling off of Hair from the Eye-lids or baldness of them, called in Greek, Madarosis, and Milphosis, in Latin, Defluvium pilorum, or Glabrities palpebrarum, also of a Callosity joyned with baldness in the Eye-lids, called in Greek, Ptilosis, in Latin, Crassities callosa palpebrarum.

M*adarosis*, is only taken for the falling off of Hair from the Eye-lids, by a Defluxion of sharp Humours : where the Hairs do simply fall away, and the utmost part or edges of the Eye-lids are red, like unto red lead, the affection is called *Milphosis*, or *Miltosis*. The cause, according to *Avicen*, is a gross Salt Humour which maketh the Eye-lids red, and brings ulceration to the parts where the Hairs take Root, the Eye thereby being sometime impaired and corrupted. But if the edges and extremities thereof grow thick and hard, in such a manner, that the Hair cannot there be fastned, the Disease is named *Ptilosis*, being a mixture of *Madarosis* and *Xerophthalmia*. The cause, as *Avicen* says, is not only in regard of the matter (as when Vermin

min and Worms are ingendred, or rather when the Humour is salt) but also in respect of the place, as when it is hard and thick, which hindreth the passage of the Vapours, whereof Hair is engendred, so that they cannot come to the edges of the Eye-lids. In the Cure, you shall have regard to sweeten this sharp and corroding Humour; and if any Vermin be there, they shall either be taken away, or destroyed by Medicines properly applyed for that purpose. This being done, lay to it such Remedies, as have the virtue of producing Hair. *Avicen* commends Mice-dung beaten to Powder, as also *Al-cool cum melle*. Where the Eye-lids are thick, he used a Cataplasim of Endive, Oyl of Roses, and White of an Egg, commending moreover the use of bathing in the Morning.

C H A P. VI.

Of the hardness of the Eye-lids, called in Greek, Scleriasis, in Latin, Durities palpebrarum, and of the Shirrous Apostume in them, called Scirrosis.

S*cleriasis*, is an hard Tumour on the Eye-lids, with redness and pain, which cannot, without much difficulty, be wholly removed, being of longer continuance then an Inflammation; and when it groweth harder, and the redness is changed into blue, it is named *Scirroptthalmia*. These are the Consequences of some violent preceeding Inflammation in the Cure, especially the hardness being outward, you must shut the
Eye,

Eye, and rub it a long time with your finger, and then use an Emollient Fomentation, as R. of Mallows, Holihock, Pellitory of the Wall, Violets *an.* M. i. Linseed $\mathfrak{z}$ ss make thereof two Bags, which seeth in Water. After this shall be applied a mollifying Plaister, as *de Mucilaginibus*, and *Diachylum iracatum*; amongst others, *Vigoes* Plaister, *sine Mercurio*, is singular. You may put also into the Eye, Collyria of Mucilage of Linseed, and Quinces, and a little Womans-milk.

C H A P. VII.

Of the roughness of the Eye-lids, called in Greek, Trachoma, in Latin, Asperitudo: Also of the Fig in the Eye-lids, in Greek, Sicosis, in Latin, Ficositas, or Ficosa Palpebra, and of the brawny or callous Eye-lids, called in Greek, Tilosis, in Latin, Callosa palpebra.

T*rachoma*, is an inequality and roughness of both the Eye-lids in their inward part, with an hard ruggedness, as if the Seeds of Millet were within them. If the Disease encrease and there appear Clefs and Rents, and little parts protuberating not unlike Figs, it is called *Sicosis*. And when the Disease is waxen old and hardned, the Eye-lid becometh callous as hard as Brawn, which is called *Tilosis*. This ill affection is produced many times by the long use of Eye-salves, or by a sharp Humour flowing unto

unto them, and sometimes without any evident cause. In the Cure thereof, after general things, the use of this Collyrium is wonderfully commended by *Ætius*: *℞ testa sepiæ, 3 viij. punicis 3 viij. rubricæ sinopiæ, ammoniaci thimiamatis an. 3 x. gummi 3 viij.* put them into Water, where-with make an Ointment for the Eyes, and presently upon the anointing with a Sponge, dipt in cold Water, wash the Eye-lids: Or *℞. cad-miæ 3 xvj. aris usti 3 jv. seminis biosciam 3 j. opii 3 ij, mirrh. fructus ericæ, acaciæ ana. 3 jv. gum-mi. 3 viij.* bruise them all dry, and put to them Womans-milk, and then beat them again in Womans-milk: Lay them to the Eye, but first take care to use a Fomentation or *℞. Chalcitidis usti 3 iij. Croci 3 viij. Melli ix.* bruise them with Water, and then dry them; put afterward Honey unto them and use them.

C H A P. VIII.

Of the Hares Eye, or open Eye, called in Greek, Lagophthalmos, in Latin, Leporina palpebra.

L *Agophthalmos*, is when the higher Eye-lid is so drawn back, that in shutting the Eye, the whole is not, nor cannot be covered totally, but keeps open in sleep, as we see Hares do sleep. Of this there is three kinds, according to *Avicen*: The first is, when the Eye-lid being drawn back, covereth not the White of the Eye, which proceeds either from the first Frame of it, or by incision, made in the aforesaid Eye-lid, and
this

this is called *Leporinus*, that is, the Hares-eye. The second kind is, when one part of the white is not covered, and thereupon ariseth *Abbreviatio*, that is, shortness, which hath the same causes with the former. The third is, when the higher Eye-lid toucheth not, nor covereth the lower, which proceedeth either of some Kernel, or excrescency of Flesh, or by a Convulsion of the same Eye-lid. Besides the before-named causes, this-Disease may proceed sometimes from the closing up, or, as it is commonly called, Cicatrizing of a Wound or Ulcer, and that, either where the Ulcer doth it of it self, as in a Carbuncle, or after the Eye-lid is very much cut, and so over-much loosed, or because it hath been lifted up by cutting, or hath been cauterized or seared unadvisedly. Concerning the Cure, if the Eye-lid be too short, it is impossible to recover it by any kind of Cure or Operation: If it want but a little, it may be amended and restored in this manner: When you have search'd the sick party, you must cut the skin a little under the brows, in manner of a Cross, whose points and corners are turned down, with this consideration, that if this defect be arisen from a rash incision and sewing of the Eye-lid, you then make your incision upon the Scar, or where it is drawn back: The deepness of the incision must reach to the gristle, yet not touch it: For if it be cut, the Eye-lid falleth down, and afterward cannot be lifted up. You shall make separation of the edges in the incision, with scraped Lint, to the end that the Eye-lid may fall down, and return equally to its former shape and bulk, as also to keep the divided skin from rejoyning, causing a little flesh to grow, and to fill up that place,

place, that afterward the Eye may be easily and conveniently opened. Concerning local Medicines, you must avoid all that are drying, but only loofing, made of gross unctuous things, as a fomentation of mollifying and loofing Herbs. *Unguentum basilicum*, made of Wax, Rosin, Black Pitch, and the Sewet of an Ox, is much commended, as also the Mucilages of Quince, Fennegreek, and Linseed.

C H A P. IX.

Of the Inversion, or turning inside out of the Eye, called in Greek, Ectropium, in Latin, Inversio.

E*ctropium* is, when the lower Eye-lid turneth the inside out, and draweth so much back, as not to cover the white of the Eye, nor to be joined to the other Eye-lid which is above. This affection is not natural but produced by too much loofing Medicines, or by superfluous Flesh grown in the inner-part of it; or rather, as *Ætius* saith, when the Flesh in the corner of the Eye, is too much increased and overgrown, or by cutting away too much of the Skin in a Palsy, labouring by that means to make it shorter; in like manner, burning, cicatrizing, or cutting on the outward part of the Eye-lid, may bring this defect, and old Age may also procure it. The cure must be divers, as the causes are various, requiring rather the Hand of the Chyrurgion than Medicines. If then it proceed from the over-growing of the Flesh,
and

and the same be little and tender, it may be abated and consumed with Medicines properly qualify'd to take away Flesh: If it be old and dry, it must be cut away. The Operation must be performed in this manner. Take a Needle, with Thread in it, and put it through the lowest part of the Flesh which groweth out, then with the same Thread lift it up, and the Eye-lid with it, and with the point of a Penknife, cut it by little and little, or with a crooked *Vause*, you may cut it all at once if you can, but take heed lest you take any part of the Eye-lid away. If the Eye-lid recover its natural position and returning inward do cover the Eye, you may be content, using only Medicines somewhat adstringent, to close up that which is cut away, and to prevent pain and inflammation; but if it fall back, and return to the former disorder, then must two overthwart incisions be made gently in the innermost part of the Eye-lid, which shall begin in the midst and lower part of it, being drawn both overthwartly, one to the great corner, the other to the less, nigh unto the Eye-lid, and having gathered both together, there will be taken away a little piece, like unto the great Letter of the *Gracians* named Δ ; but be careful to avoid cutting of the skin in such manner: Let the point of it be to the lower part and bottom of the Eye, and the larger open part arise and ascend towards the Eye-lid. Now if this defect proceeded from incision, burning, searing, cicatrizing in the Eye-lid, which hath not been well and dextrously performed, then must incision be made of the Skin, in the outward part not far from the Eye-lid, which beginneth at one corner of the Eye, shall end at the

the other, in form of a Cross, making separations of the edges, with Lint put between them, lest they should joyn again. But if it proceed from old Age, or oſtoo much looſing, all that which is looſe, muſt be outwardly ſeared, either with a fine Inſtrument, which kind is called *Cauterium actuale*, or with a Medicine, which is called *Cauterium potentiale*, with great care for fear you touch the Eye.

C H A P. X.

Of the Eye-lids cloſed and joyned together, called in Greek, Agchyloſis, and Agchyloblepharon, in Latin, Inviſcatio, or Detentio palpebrarum: And of its divers kinds, named, Symphifis and Prophifis blepharon.

A *Gchyloblepharon* is, when the Eye-lids take hold of each other, and joyn together, ſo that the Eye cannot be opened: And it ſo falleth out ſometime in this Diſtemper, that the Eye-lid is knitted to the white of the Eye, commonly called *Conjunctiva*, and ſometime with the *Cornea*, or the horny Membrane: This Diſeaſe is called *Symphifis*, or *Prophifis blepharon*. Sometimes from the Birth and firſt formation of the part, the Eyelids are joyned together, as it is alſo ſometime obſerved in the hole of the Ear, Yard, Matrix, Fundament, Mouth: Or when an Ulcer hath been negligently and ignorantly cured, either in the Eye-lids or Membranes,

Conjunctiva or *Cornea*, because in healing of the Ulcer, the parts which ought to have been separated, have been closed and glewed together. Concerning this Cure, if the Eye-lids are equally joynd, they must be separated, which I would have dextrously done, with the point of a little slender Launcet, and after the Incision, to put between both parts, little Cloths dipped in some Eye-salve, which may keep open the wound, until both parts be healed: But when the Eye-lid is linked and fastened to the white of the Eye, or horny Membrane, the Eye-lid must be with great dexterity and discretion parted from the Eye, so as to cut rather (if so it must be) the Eye-lid than the Eye: Which being done, use such Medicines as will assuage pain, to avoid Inflammation, and defluxions of Humours, and by little and little afterwards apply Medicines, which may heal, and take away the roughness which the Incision hath left, stirring it daily, not only to put the Medicine upon it, but also to keep it from joyning together again; for which reason you must charge the Patient, to lift it up many times with his Fingers. *Celsus* saith, he never saw any ured: and with him agreeth *Mesua*, though he had experienced many things, because the Eye-lid is unseparable from the Eye.

C H A P. XI.

Of the short or maimed Eye-lids, called in Greek, Coloboma, in Latin, Mutillatio, and after Celsus, Curium.

Coloboma, is here used for any defect and want, either in the Lips, Ears, Nostrils, or Eye-lids, when by an extraordinary course of nature (as it oftentimes falleth out) these parts are cloven, in such a manner, as if there had been whole pieces taken away. The cause of this defect, is either owing to nature, through the feebleness of that faculty and virtue, which fashioned the Body in the Womb, or from want and insufficiency of matter, whereof those parts were framed, or from some other accident: As Corruption, a Carbuncle, or Gangreen, which have eaten and wasted the part, or by a stroke, which hath cut away, or made a division in the continuity of the part. As touching the Cure, it is impossible to restore that want which is in the substance: that must be natures work, not the Chirurgions hand. But the deformity of the part so maimed, may be repaired and recovered, if it be but little: If it be great, it receiveth no Cure, and tampering with it makes it only worse. The way to amend this defect when the Eye-lid is somewhat lame and maimed, is that which is used in the Disease called Hare-lips: You must dextrously with a Launcet or crooked *Vause*, take off the Skin from the outward and inward parts, which are to be joyned, and then make fast together the edges of both parts: But

if they cannot conveniently touch each other, beside this removing of the Skin, there must be made two cross Incisions on both sides, as we have before said in the Hares-eye, which shall be turned from the wound, cutting only the uppermost part of the Skin. When this is done, there shall be a needle thrust through both the Lips and edges without touching the gristle, and the thread shall be made fast on each side, as in the Hare-lips, which *Ambrose Pare* hath largely set forth, and left us the draught and fashion of the whole Operation.

C H A P. XII.

Of a fat substance lying under the Eye-lid, called in Greek, Hydatis, in Latin, Aquuia, or, Palpebrarum Aquositas, or Vesica.

H*ydatis*, is an Excreescency of Fat in the higher Eye-lid, between the Skin and the Gristle. In some, and specially in little Children of a moist Constitution, this Fat increases more and more, and causes many grievous Symptoms by overlading the Eye : and by drawing down the Rheum, the Eye-lids seem swell'd under the Brows, neither are they able to lift up themselves when need requireth. If any one press them down with his Fingers asunder, that which is between the Fingers ariseth up, whilst the other which is under them is pressed down. Those Children (saith *Albucasis*) that are afflicted with this Disease, lie sleeping always upon their Face, and

and at the dawning of the Day are violently tormented with that abundance of Humours which hath been gathered in the Night: They are not able to behold the Sun, but their Eye trembles, and sheds Tears. If this Disease be newly begun, it may be easily cured with resolving Medicines, without Chyrurgery: But if it be of long continuance, it must be taken away by manual Operation, that is, by the hand of a Chirurgion. After you have set the Patient in a convenient place, you must press down the Eye-lid at both corners with your Fingers, that by this means the Skin stretching forth, may be cut overthwart, your Hand remaining hanging down, lest the Skin or Bladder wherein the Fat is, be touched and hurt: And moreover, that after it is opened, the same may be taken away joyntly with the Bladder. This done, you must press it out with the Fingers, or rather with a pair of Pincers pluck it out by the Roots, since it may be easily separated: Proceed afterwards with it, as you would in the Disease called a *Woolf*. But if the Bladder be cut, it produces great pain, because it sendeth forth its moisture, which being thin and small, or as it were minced, cannot be gathered again. If this do so fall out, you must apply such Medicines as will bring it to suppuration, and so consume it, and if it be needful, to use such as will take away the superfluous Flesh, called *Cathairetica*, lest if there remain any Skin of the Bladder, it may engender again the same Disease, as we see it in *Wolves*.

C H A P. XIII.

Of the Corruption or Rottenness in the Eye-lids, called in Greek, Midesis, or Midosis, in Latin, Putredo.

M*idesis*, taken generally, is common to all parts, yet it is more especially used for the Corruption of the Eye-lids, when they appear much swell'd, a viscous matter doth distil from them usually, and they are overladen with Fatness. The cause of this Disease proceeds from a stream of [superfluous and corrupt Humours, which fall down upon the Eye-lid, especially in the inward part of it, wherein nature hath placed a fat substance, to keep the Eye moist, by reason of its continual motion. To cure this Distemper, *Dioscorides* saith, *Nardus* is a singular Remedy, because it bindeth and dryeth the superfluous Humours, whose Corruption produces this Disease. Such Eye-salves as are drying without any considerable sharpness are most fit for it, as for instance, *R. Aqua plantag. & Rosar. ana. ℥j. Tutia prepar. Aloes lot& an. 3℥. trochischor alb. ras. ʒj. fiat Collyrium.* If there be great corruption, a little *Unguentum Ægyptiacum* dissolved in Wine will be most excellent: But you must be circumspect, for fear of hurting the Eye.

C H A P.

C H A P. XIV.

Of the Wart, or Barley-corn on the Eye-lid, commonly called a Stian, in Greek, Crithe, or Posthia, in Latin, Hordeum, or Hordeolum.

C*rithe* is a small hard, firm, and oblong Tumour, like unto a Barley-corn, whereof it hath the name, growing on the extremity of the Eye-lid, where the Hairs are which contained the Humour in a little Skin, and hardly comes to suppuration or maturity. *Galen* calls it in Greek, *Posthia*, which signifieth desire, as *Philippus Imgrascias* tells us, because Women when they have conceived are naturally subject to longing and desiring of many things, which if perhaps they can't obtain, those who will not give it them at their request, they curse and threaten with *Crithe*, i. e. desire. In Curing of it, *Avicen* used the Blood of a Pigeon, or Turtle, and this Liniment: ℞. *oliban. Mirrh. an. 3 ij. ladani. 3 ss boracis 3 j. cum oleo liliorum fiat linimentum.* *Antonius Musæ* appointed a Plaister of *Galbanum* mixed with *Nitrum*: *Paulus* made a Fomentation of sodden Barley: *Galen* of the Blood of Ravenous Birds, which issueth from them after the Head is pulled off, or else a Plaister of White Wax. If the matter within it be conspicuous to the Eye, *Celsus* orders to open it, that the Humours may come forth, which, by its resting therein, might corrupt the Gristle. But if this affect be in the outward part, to purge and cleanse it, *Ætius* used the yolk of an

Egg and Honey mingled together, and to engender and restore flesh, *Pulvis capitalis*. If the Gristle be corrupted within, then he turneth the Eye-lid, scrapeth away so much of the Gristle as is decayed, putteth upon it *Orichalcum* burned, and reduced into a fine Powder, and upon that the yolk of an Egg mix'd with Honey and Oyl of Roses. On the second Day he useth a Fomentation, and continueth the former Medicine. On the third Day he filleth up the Eye-lid with Honey, and upon it applieth a *Collyrium* of a repelling quality.

C H A P. XV.

Of the Hail-stone of the Eye-lids, called in Greek, Chalaxion, in Latin, Grando.

C*Halaxion*, is a Congeries of superfluous Humours, gathered both in the higher and lower Eye-lid, in the shape of an Hail-stone; when this Tumour is pressed, it remains not unmoveable, but changeth the place, wherein (as also in its shape) it is distinguished from the beforenamed Disease *Hordeum* or *Stian*. *Ætius* maketh two kinds of them, wherof the one is plainly to be seen in the outward part; in which it groweth like unto little round Knobs, transparent as Hail; out of which, when it is opened, issueth forth an Humour like unto the white of an Egg. The other kind is a Tumour in some part hard like to a Bean, extreemly painful, if it be roughly touched; so that sometime the extremity of the pain causeth the Patient

tient to faint and swoon. Concerning the cure, if the Tumour be without the Eye-lid, let the incision be outward upon the same, and with a little Hook or other Instrument pluck forth the Corn, applying to it instantly a Plaister, consolidating. But if the Hail stone be within the Eye-lid, and bright overthwart the Gristle, after you have turned the inside out of the Eye-lid, make your incision overthwart, and the Corner being taken away, use consolidating Medicines. Some put thereto a little chewed Salt, to consume the Humour that may remain behind.

C H A P. XVI.

Of hard Knobs upon the Eye-lids, named in Greek, Poriasis, in Latin Tophus; also of Gravel, or the Stone in the Eye-lids, in Greek, Lithiasis, in Latin, Lapidescencia or Lapis palpebræ.

P*oriasis*, is an hard callous Tumour arising in the outward part of the Eye-lid. *Galen* affirmeth it to come also into the inside. *Lithiasis* is an hard, white, rugged Tumour, in Colour resembling the Sapphire-stone. They are both caused principally by coagulated Humours, gathered in the Eye-lid; as if the second kind of *Grando*, mentioned in the preceding Chapter, should become dry and congealed, whereupon should ensue *Poriasis*, and this by growing more dry and hard like unto a Stone, should ensue *Lithiasis*. In curing the hard knot, named *Poriasis*,

riasis, the Skin must be cut on the outside, and all the matter removed from the bottom; after which apply unto it a consolidating Plaister. In the cure of the Gravel or Stone called *Lithiasis*, the Eye-lid must be turned, and the incision made on the inside, and the matter of the Tumor brought out with an Instrument, and then apply unto it a little Salt with Spittle. *Ætius* useth the Powder of *Orichalcum* burned, and over it layeth a defensive made of an Egg, Wine, and Oyl of Roses mingled together, and rolleth it.

C H A P. XVII.

Of Lice which breeds in the Eye-lids, called in Greek, Pthiriasis, in Latin, Pediculation.

P*thiriasis* is, when the Hairs on the Eye-lids are infected with little broad Lice, bred by excessive eating and drinking, of Uncleaness and ill Diet. In the cure the Patient must eat good wholesome Meat, since they owe their origine only to ill Humours: The Patients Hair must be shorn, he must use frictions or rubbings, fasting every Morning; such Remedies must be apply'd as may dry, strengthen and comfort the Head. After this, the Lice which are bred already, must dexterously be taken away, and such Remedies used, as may not only destroy those which remain, but also prevent the Generation of others. To this purpose *Ætius* commends a fomentation of Sea water, and afterwards to apply this *Collyrium*.

lyrium. R. allum sciss. 3 j. staphidis silvest. obol. j. piperis obol. ij. aris usti 3 j. beat them to fine Powder, and use them dry. Celsus used the following R. sandarac. spuma nitri, uva tamina; beat them together, put unto them as much Oil and Vinegar, until they become to the consistency of Honey. Avicen commends Brimstone to this purpose: This is an approved Oyntment R. unguent rosar. mesue 3 j. sulphur vivi & staphisag. an. 3 s. hydrarg. cum salina extinct. 3 j. fiat unguentum.

C H A P. XVIII.

Of Hairs growing in the Eye-lids which hurt the Eye, called in Greek, Trichiasis, in Latin, Oculorum a pilis offensio: Also of its divers kinds.

T*richiasis* is, when the Hairs which grow either naturally or preternaturally on the Eye-lid, do hurt and prick the Eye, and cause weeping. Of this the ancient Writers have left us three kinds; the first whereof is named *Ptilosis*, which is, when the Eye-lid is loose, and the natural Hair falleth round about into the Eye and pricketh it. The second is called *Districhiasis*, or *duplex ordo pilorum*, that is a double order or set of Hair, when one hurteth the other as opposite Adversaries. The third is called *Phalongo-sis*, or *acies pilorum*, i. e. ranks of Hair when the edge of the Eye-lid, with the Hair, which is upon it, without any relaxation of the Eye-lid, is turned and wrested into the Eye, in such a manner,

ner, that the Hair is hid, neither can it be seen without the Eye-lid be lifted up on high. The cause of this preternatural Generation of Hair, proceeds of the abundance of superfluous moisture, which nevertheless is not sharp nor biting, just as the Earth being over-moist brings forth plenty of Herbs. For if the Humour were sharp, or in any manner fretting, by remaining in the Eye-lid, it would corrupt the Hair Nature planted thereby. It might also cause by its increase and long continuance a looseness in the Eye-lids. Concerning the cure, if the Hairs be not natural which grow there, let them be pulled away with Pincers, and afterward apply such Medicines as may stop their growing again: Of this sort are Ant's Eggs, the Gall of a Calf, the Blood of all sorts of Frogs; amongst others, this of *Archigenes* is highly commended, it is made of the Blood and Gall of an Hedge-hog mix'd with *Castoreum* in equal proportion. I confess I have not seen any tryal of these Remedies; and therefore after the Eye is turned where they stick, the best course is to sear them to the Roots with an Iron made for that purpose; for this will utterly destroy them. This done, apply such Remedies as may prevent inflammation, and the Escar being once removed, the Ulcer shall heal easily. Thus must you deal with those Hairs which grow naturally, if their turning inward offend the Eyes. But before you come to sear the place, you must labour to gather and tie up the Hairs, which you shall do more conveniently, if you knit them with other Hair which is near to them, by a Plaister framed after the manner of dry stitching. When all are thus gathered and made fast to the outward part,

part, let them so abide a good space, that they may not return into the Eye, but receive another shape : But if the edge of the Eye-lid be also turned inward, and yet the Eye-lid not loosed, there must be an incision made on the inside or straight line, that by this means, the Skin may be separated and let loose, which did draw the Eye-lid inward, and the Hair joyntly with the same may look upward. Concerning the Curing of *Ptilosis*, which is, when the Eye-lid is relaxed, as we say, or too much loosed, you must have recourse to the Operation, set down in the Chapter following, touching *Atonia*, or weakness of the Eye-lids.

C H A P. XIX.

Of the looseness or weakness of the Eye-lids, called in Greek, Atonia ton blepharon, in Latin, Imbecillitas palpebrarum.

A *Tonia ton blepharon*, is a simple weakness of the Eye-lids, without appearance of any other outward cause, yet the party thus affected, is not able to lift them up, but is forced to keep them shut, unless he lift them up with his Hand, which is the cause that they which are in this miserable estate, cannot awake, nor see plainly. This Disease proceeds from the abundance of moisture, which softneth and looseth the Eye-lid, and it stretched beyond the bounds of nature, so that when one would, by the benefit of the Muscles, lift up his Eye-lid, and open his Eye, he cannot do it fully, because of
its

its weakeness and looseness. The Cure must be undertaken thus : After the Chyrurgion hath placed the Patient to his liking, he shall take between his Fingers the Skin of the Eye-lid (leaving the Gristle, which since it is not loosed, needeth no incision) lifting up so much of it, as he shall think expedient for the restoring of the natural form to be taken away. For there are two dangers : One, least too much be cut away, for then the Eye-lid will not cover the whole Eye : The other, lest too little be cut, for then your labour is lost, and the Incision utterly unprofitable.

Therefore upon this consideration, it shall be necessary to mark the place with Ink, drawing two straight Lines, where the Incision shall be made in such a manner that between the edge where the Hairs do grow, and the nearest of your Lines, there be a space remaining to thrust in a Needle.

This done, you shall cut gently, piercing the Skin which is between the two Lines, which may be done all at once, holding with the Fingers, and lifting up so much of the Eye-lid, as you will cut away : Afterward with a Penknife, Launcet, or Cisers, cut directly upon the two Lines, taking away the piece which is in the midst, or rather make your Incision upon each Line, so long as it is requisite, and cut away that which is in the midst, beginning at one end, and gently removing the Skin, until you come to the other, and all be clear taken away. This done you shall joyn both sides of the wound, with a Needle put into the midst, which shall not be wholly and suddenly stay-ed, but command the Patient to close his Eyes, and

and if the Eye-lid come not down to cover all the Eye, let the point of the Needle slip, if it do cover all, make it fast: And in what part the Skin of the Eye-lid shall be yet too large, there take away your Thread which is in the higher Lip of the Wound, and cut away so much of it as you see needful, then thrust through the Thread again, and draw together both the Lips and edges of the Wound: and afterward at both the ends put through the Needle. This part of your Work thus finished, you shall then apply a Defensive, and a consolidating Medicine, to joyn the continuity dissolved. You must be prudent in pulling away your Needle, lest it may procure too great a deformity by the Scar which remaineth. *Paulus Aegineta* saith; he knew Chirurgions which used no stitching, but such Medicines only, as had a virtue to close up, and consolidate the Wound, notwithstanding which the before-said manner of stitching is the surest way.

C H A P. XX.

Of small Excrescencies of Flesh in the Eye-lid, or Mulbery, called in Greek, Pladarotes, and Sarcoma, in Latin, Morum.

P*Ladarotes*, are little soft discoloured Bodies, growing within the Eye-lids: As *Sarcosis* is an Excrescency of thick Flesh, resembling small Pieces of Pitch growing within the Eye-lid. These proceed from corrupt Blood, which engenders

genders soft viscous discoloured Flesh, not unlike the Blood of Flesh when it is washed. An exulceration in the innermost Skin of the Eye-lid, which cannot close up, may also cause this affect, for by continuance of time these do grow out, and close up the Ulcer in some part. Concerning the Cure, if they be thick and gross, they must be cut away dextrously with the point of a Launcet, and afterward let the place be touched with a little fine Salt, Allum, of Copperas-water, applying also such Medicines as may dry the Eye without great pain.

C H A P. XXI.

Of the swelling or extension of the Veins, called Varix or Varices, in Greek, Cirfos; also of Meliceris, Steatoma, Atheroma.

C*irfos*, is an extension of the Vein, most usually proceeding of Melancholick Blood. *Atheroma* is filled with matter, like unto a Pul-teise of Wheat-meal. *Steatoma* containeth matter not much differing from Sewet: The Humour in *Meliceris* resembleth Honey. All these Humours are enclosed in a little Bladder or Skin, and within the same oftentimes are found many other strange Bodies, as Stones, Hairs, Nails, Glass, yea little Beasts, like Flies or Gnats. In the Cure, the Skin of the Eye-lid must be cut even to the Bladder which contains the Humour, and if it be possible, it must be taken out together: for if any part remain, the Disease returneth. Therefore, if it happen you
be

be constrained to leave any part behind (as sometime it falleth out.) that must be consumed by Medicines, which have vertue to mollify and procure Suppuration, but in the end such as do cleanse and increase Flesh in the wound. But concerning *Varices*, or swoln Veins, *Ætius* would not have them medled withal, because they are rebellious and malignant for the most part, as also certain other red painful Tumours are pestilential and incurable.

B O O K V.

*Containing the Diseases incident to the
Membranes or Parchment-like Skins
of the Eye.*

C H A P. I.

*Of the black, mortified or blood-shed Eye, cal-
led in Greek, Hyposphagma or Aimalops,
in Latin, Sanguinis Effusio, or Sugilatio.*

Hyposphagma are red Spots, in the end, appearing black or blue, proceeding from Blood which floweth in the Eye, by the Veins scatter'd amongst the Skins and Coats of the same. This happeneth by some stroke, cry, fall, or great effusion of Blood, when the Mouth of the Veins are opened, or burst when they are over-full. Those that are troubled with this Distemper imagine whatsoever they see to be red, because the Blood is not only disperfed, and extravasated amidst the conjunctive Membrane, or white of the Eye, but also in the horny Membrane which maketh them red; whence it is evident, that whatsoever is offered to the sight must appear red, as we daily behold in Glasses, which being green, red, or yellow, represent to

us

us all things in their own colours. The cure must be begun with Phlebotomy ; and as for Topicks or external Applications, the Blood of a Turtle or Pidgeon is excellent at the beginning. as is also a fomentation of Camomil, Melilot Hyssop, and other Herbs of a discutient quality. The Cataplasim of Hyssop sodden with Cows-milk is praised by *Avicen*. In inveterate blueness or blackness, *Ætius* commends this Remedy : Put the Urine of a sound Boy inro a Vessel of Copper, and beat it with a brazen Pestle many Days in the Sun ; that by this means the moisture may decay ; when it is dried, put Honey into it, and use it.

C H A P. II.

Of the puffing up, or swelling of the Membranes of the Eye, called in Greek, Epanastama Osthodes, in Latin, Ficus, or otherwise, Hymenon epanastasis, Rebelliones, or Membranarum eminentiæ & extuberantiæ.

E*Panastama osthodes*, is a tumour or swelling of all the Membranes and Skins in the Eye : If this affect encrease, it is named *Hymenon epanastasis*, as if the said Skins did swell until they were thrust out of their proper place. This Disease ariseth from a long Series of Humours suddenly falling down upon the Eye, or from a flatulent Spirit, enclosed betwixt the Membrane, or rather from an inflammation, extending the said Membranes. It may also be occasioned

in the same manner as is related in that Disease, when the Eye falleth out. The cure shall be the same to be used in violent Inflammations and falling out of the Eye.

C H A P. III.

Of wrinkles or a corrugation in the Membranes, called in Greek, Rutidosiſ, or Ruſſoſiſ, in Latin, Corrugatio.

R*utidosiſ, or Ruſſoſiſ,* is a corrugation or plaiting of the Coats or Skins, whereof the Eye is made. Some acknowledge two kinds, whereof one is inward; to wit, when the Membrane called *Uvea* is wrinkled, which causeth the Disease named *Pthiſis*; of which we shall speak hereafter. The other is outward, when the Membranes *Cornea* and *Adnata* are loosed. This Disease proceeds from weakness and cold, which sufficiently appears thence, that it is most common to aged People, as is observable in their wrinkled Eyes. For the Humours being diminished in old People, and the Spirits become thick, and the Humours so dry, that the Eye is quite empty, it falleth down, and the Membranes are so wrinkled and plaited together, that some see not at all; others with great difficulty. For the Plaits and Wrinkles being doubled upon the Membranes, they make the horny Membrane so thick and dark, (which should be naturally plain and bright) that such things as are offered to the Eyes cannot be discerned. There is small hope for the cure of this Disease, since
it

it is principally owing to the defect of old Age Nevertheless, not to leave the Patient destitute of all succour, let him use such means, as are fit to beget and encrease good Juice. Let him use particularly those Eye-salves, whose Vertue is to moisten and comfort the Membrane. *R. euphras. betonicae verb. eariophyl. ana. m. ij. chelidoniae, salviae an. m. iv. vini albi lib. s. seminis anisi, & feneculi an. ʒ j. nucis mesch. ʒ s. cinamon. ʒ ij. aloes hepat. ʒ iv.* distil them together. You shall take a little of this Water, and as much of the mucilage of Quince-seed mix'd together, and put some of it into the Eye. The Medicines set down before against dimness of the sight and hereafter in the Chapter of the Cataracts, are very profitable also in this case.

C H A P. IV.

Of the Inflammation of the Eye, call'd in Greek, Ophthalmia, in Latin, Inflammatio adnatae, or Lippitudo: Also of its divers kinds, viz. Chemosis in Greek, in Latin, Hiatus, or Hiatulatio, Phimosis or Præclusio, Raraxis, or Perturbatio, Epiphora, or Delachrimatio, Ophthalmia sphacelifosa or Inflammatio ocularis in sphacelum degenerans.

O*phthalmia*, is an Inflammation of the Membrane in the Eye, named *Conjunctiva*, attended with swelling, extension, pain, redness, heat, puffing up of the Eye-lids, which do

hardly either open or shut, and cannot suffer to be touched with the Hands. *Taraxis* is taken for a sudden Inflammation of the Eye, being red and moist, but less grievous than *Ophthalmia*, proceeding from outward Causes, as Smoak, Dust, the Sun, the Moon, Oyl, rubbing of the Eye, &c. Some affirm it to arise from the use of strong Wines, Garlick, Onions, or Mustard. *Chemosis* is, when the Membrane called *Conjunctiva*, is lifted up higher than the *Cornea*, as if this were in a Hole; which besides the redness and heat, causes the Eye-lids to be turned, so that they cannot cover the Eye: Contrary unto this is *Phimosis*, when by means of a great inflammation, the Eye-lids do stick fast to each other, and cannot be opened. Some impute this defect to the Eye-lids, but the hurt they receive is but a Symptom in this Disease. *Epiphora* is taken generally for a sudden stream of Humours in any part, as *Pliny* calleth *Epipharam uteri, ventris*. Notwithstanding this, it is properly used for the affection in the Eyes, when with a violent Inflammation, a great quantity of Humours flow unto them. All these before-mentioned affections do often accompany each other. The causes are the recourse of Blood, Choller, Flegm and Melancholy, and most commonly a mixture of both Blood and Choler. The signs that it is engendered of Blood, are redness, heat, great swelling with extension, thick Tears, and soon dry, soft slimy matter congealed in the corners of the Eyes, the party of a Sanguine Complexion. If the Choler be the cause, the Tumour is not so apparent, the Colour of it somewhat pale, the pain acute and biting, either no Tears issue out, or if any do, they

they are salt and bitter, the slimy matter is dry and gross, the party of a Cholerick Complexion, whereby he is sometimes subject to a tertian Ague, and voids Cholerick Excrements. When the swelling is greater, more loose, of a white Colour, the Tears without taste, and cold, little or no slimy Matter troubles the Eyes, it may be supposed to come of Flegm, which is called by *Ætius*, a cold distemperature of the Eye. The general cure consisteth in Blood-letting, Diet, Purging, by the advice of a learned Physician; but you must not omit in this case, to apply cupping Glasses upon the Shoulders, with scarification, if it be thought expedient: And if the Inflammation be very violent, and the Distemper very acute, it will be necessary to open the Veins in the Temples and Forehead, nay even to open an Artery, as also to apply a Seton behind in the Neck, or a Vesicatory either on the Crown of the Head, or behind, or rather upon the Arm: All which Remedies are intended to alter and divert the course of the Humours. And considering that such sort of Humours, for the most part, pass by the Vessels which are within, that it may seem lost labour to open such as be without, since they being emptied of the Humour which was in them, yet are filled again, from the Humours that are within, because of their Correspondence, it must be confessed, that this Cure requires sometimes the Medicines to be applied on the Temples and Forehead to be of a repelling quality, as *Emplastrum contra Rupturam*, *Desiccativum rubrum*, *unguentum comitiss. ung. Oxirhodinum*, or *Oxicrat.* and such like. Unto the Eye, if the Inflammation be little, it will be sufficient to apply this

Collyrium, of the white of an Egg, Rose-water and Plantain, beaten together. If the pain be vehement, apply this: Take of the Mucilage of Quince-seeds and Flea-seeds, drawn in Rose-Water, one Ounce, in which dissolve *Trochisc. alb. Rhafis sine opio*, one Dram: Make it up into an Ointment, and apply it warm. If the Inflammation continues, the before said Mucilages shall be drawn in Water of Poppey, or in a Decoction of it, adding thereunto a little Camphire or Poppey, and lay upon the Eye this Cataplasme: *Rx.* of sodden Apples 4 Ounces, and with the white of an Egg, and Womans Milk, make a Cataplasme. Also a Cataplasme of pure *Cassia*, new and presently drawn, is most excellent. Above all, you must have a special care to change and renew these Medicines, least they dry, and so cause Heat. Not long after you may use this *Collyrium*. *Rx.* *gum. arab. trag. ana.* 3 j. *ceruf. lot & 3 ss opij grana.* iij. Let them be all dissolved with the white of an Egg, and two Ounces of a Womans-milk giving suck. In the declination of this Disease, this may be used: *Rx.* of the Mucilage of Fenne-greek and Quince-seeds, drawn in Rose-water, and Water of Eye-bright, *ana.* 3 j. *ss* wherein dissolve *Sarcocol.* in a Womans-milk that giveth suck. 3 ij. *aloes lot & 3 j. mirrh. 3 ss* make an Eye-salve. Where there is any great Itching, or rather where the Inflammation cometh of Flegm, this is a most singular *Collyrium*: *Rx.* *Tutia preparat. aloes lot & ana. 3 ss sarcocol. myrrh. an 3 ss saccar. cand. 3 j. vitriol. alb. 3 ss aqua rosar. ʒ fœnicul. an. 3 ij.* boyl them altogether a little while in a Viol Glass, and then drop thereof into the Eye. Some commend this *Collyrium* in all Inflammations

ons of the Eyes, to take Snails with the Shells, and to beat them with a little Salt, and through an Hypocras-bag, to let the Water thereof distill, which being clear, put it into the Eyes. It many times falleth out, by long and unadvised applications of Medicines, which are cooling and repercutient; or else by some great Inflammation, that the natural heat is extinguish'd and choak'd, and thereupon ensueth a worse Inflammation than any of the beforenamed, which is called *Ophthalmia Sphacelifosa*, which depriving the Eye of the natural temperature, doth make it corrupt and utterly perish; This Disease is called by *Galen*, in his Introduction, *Gangrena ophthalmou*, the Gangreen, or Mortification of the Eye. When this happeneth, you must have recourse to Remedies proper for Gangrenes, changing them, as the state of the Disease and party shall require.

C H A P. V.

Of the Nail of the Eye, commonly called the Web, in Greek, Pterugion, in Latin, Ungula, or Angulus.

P*terugion* is, when the white of the Eye, called *Conjunctiva*, is increased above measure, or when in it is ingendred a superfluous excrescency of Flesh, after a continual defluxion of Humours or Scabs, or an inflamed Itching. This Disease most commonly takes its beginning and increase at the great corner of the Eye, nigh unto the Nose, seldom at the lesser, and most rarely it is seen to begin at the higher or lower Eye-lid. It extends to the horny Membrane, encreasing
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by degrees till it cover the Apple of the Eye, and darken the sight. The ancient Writers have left us three kinds of it. The first is named *Membraneous*, that is, Skinny, being a fine with Skin, beginning at the great corner, by little and little encreasing and growing outward. The second is called *Guido*, *Adipeus*, that is, Fatty, which is like a congealed Humour, that becometh round, when it is touched to be pulled out : It groweth in the same place with the former. The third is called by the *Arabians*, *Sebel*, in Latin, *Panniculus*, which is worse than the others, being interlaced with gross red Veins and Arteries, resembling a thin Cloth or Web : Upon this appeareth oftentimes Inflammation, Redness and Itching. Some of them stick not to the Eye in every place, but hold only the edges; so that between the Nail and the Eye an Instrument may be put. The cause is repletion in the Head, especially of thin Blood, mingled with a Salt Flegm, and weakeness in the Eye, which maketh it apt to receive these Humours.

It succeeds oftentimes the ill curing of an Inflammation, whose Heat hath been disorderly asswaged, or else from an old and hard slimy matter, which hath taken root in the Eye. In some Bodies, it owes its origin to the coldness of the time and place, as in old Men which abound with Salt-Flegm, or in intemperate Persons, who suppress their natural Heat with drinking : the coldness of the Season and Place may increase it, when they which are overladen with such Humours by cold, do multiply and stir up the course thereof. If the stream of Humours turn outward, the Veins seem red and large, there is an obscure darkness like to
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Sinoak upon the horny Membrane, the Cheeks are red, and the Disease very much raised above the white of the Eye, there is great pain and heat on the Brows, and the Skin named *Sebel*, groweth in some part of the Eye-lid. If the course of the Humours turn inward, the Veins are not so thick and red, the patient sneezeth oft, especially if he be in the Sun, he feelth great Itching, the Eye sendeth forth Tears. This Disease and principally *Sebel*, is joyned withan Itching Boiling, Redness, Ulcers, Tears, swelling of the Eye lids, and a slow motion of the Eye: it so far impairs the sight, that the party cannot abide the light for any long time. The Cure is both long and difficult; for some are never healed, others have it by inheritance, and in certain Persons it is contagious, and (*Avicen* saith) it goes from one Eye to the other. That kind which is white and narrow at the bottom, is easily cured, especially if it stick not fast in every part; but that which hath none of these qualities, can hardly be cured. There is no dealing with a Nail or Web which is thick, standing forth, hard, and by consent, causing pains in the Temples: For this is malicious and of a Cancerous nature. The red Nail being cured, causes pains in the Head, and the Megrym. Moreover if a Webb be spread over the Apple of the Eye, and fastned to it, the Cicatrix which remaineth after it is taken away, hinders the sight. If at the same time there be a Cataract, and a Web in the Eye, and the Cataract be but beginning, by labouring to take away the Web, the Cataract will be increased considerable. After the general Cure, which consisteth in Blood-letting, Purging, Cupping, a good order

order of Diet, and other necessary means, which may stop the progress of the Web, and divert the Humours. Another way you may attempt the Cure, either by Medicines, or by the Hand of a Chirurgion. If it be in the beginning, it may be consumed by such Medicines as are used to attenuate and eat away the Cicatrices in the Eyes. *Ætius* affirmeth, that they may be consumed by Medicines, among which this is of singular vertue: *℞. Chalcitidis ustæ ʒ xx. cadmia ʒ x. squamæ seris rubri ʒ j. piperis ʒ j.* But if it be of an old date and thick, then must it be cured and taken away by incision, in this manner: The Patient must be placed, either over-against the Chirurgion, or rather in such a posture that he may lay his Head in the Surgeons Lap (as we used to say) let one turn up one of the Eye-lids, and the Chirurgion the other: If he sit over against the Patient, let him turn up the lower: If he have his Head on his Knees, then the higher Eye lid. At the same time let the Chirurgion with a pair of Pincers, or some fit Instrument, lift up the Web, and with the other Hand thrust through a Needle with thread under the Webb, close by the Membrane, whereunto it is joyned: And leaving the Needle there, he shall take both ends of the Thread which is passed through, and by them lift up the Webb: If it stick fast in any part, he shall separate it with the point of a *Vause*, or Cifers, or some such sharp, fine, and delicate Instrument, wiping away the Blood issuing from it at the same instant, until he see the Veins of the Web decayed and consumed by the voiding of the Blood, and continuing his work till he come to the corners: And mark, that as often as he draw-
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eth the Thread, so often shall he loose it, until he attain to the beginning of the Web, and the extremity of the natural Flesh resting in the corner. For there is danger of two inconveniences ; one, lest some piece of the Webb remain behind, whereby it may grow again, unless it be removed by Medicines : The other, lest he cut the Flesh which is in the corner, since it will follow the Web, if it be violently pulled out, and so may deceive the Chirurgion. If this Flesh happen to cut, the hole which it did stop before, is opened, whence issues out water continually; which affect the *Grecians* call, *Rhyada*, whereof wee shall speak in its proper place : Therefore a Chirurgeon must be able to discern how much is sufficient to be cut away ; which being done, he shall lay a fine Linnen-cloth, or Lint dipped in Honey upon the Eye, and above that a defensive against Inflammation : The Patient shall be dressed three or four times a Day, and open his Eye, lest perhaps the Eyelids glue and joyn together, or else stick to the Eye, which is a third inconvenience. You must continue the applying of Lint, and at last use a *Collyrium* which may close up the Ulcer. As R^x. *Aqua plantag. & rosar. ana. ʒ j. ʒ ij. tutia prepar. aloes an. ʒ ss trochis. alb. Rasis ʒ ss. saccari cand ʒ j.* If any other hurtful Symptom happen, you must take immediate care of it, omitting the proper Cure for that time.

C H A P. VI.

Of certain white Spots in the Membranes, called Cornea and Conjunctiva, called in Greek, Aglia or Aiglia, in Latin, Albicans cicatrix : Also of a Knot there arising, called in Greek, Poros and Porosis, Tophus, or Durities adnatæ, or Cornea.

Aglia is a white Spot resembling a Cicatrix gathered upon the Membranes *Conjunctiva* and *Cornea*. This owes its rise to a flegmatick Humour, which by little and little is fixed in the part. It may also proceed from some piece of a Web being left behind, about which some Humour may be congealed, and in time come to a Scar. Where these Humours become very hard, you may discover as it were a knot upon the Membranes *Conjunctiva* and *Cornea*, and it is called *Prosis*. Concerning the Cure, if this white Spot be very high and raised, it must be consumed, with the *Collyrium* set down before in the cure of the Web; or rather if it may be conveniently done, there should be only used a drying Medicine. In curing the Knot called *Porosis*, you must first pull off the Skin, then apply such Means as may consume it; afterward use a drying *Collyrium*, which may also close it up. But if neither of these fore-named Diseases are attended by any great deformity or hindrance to the sight, my advice is, to use such Means only, as may stop its increase. For it happens

happens many times, that whilst they endeavour-
ed to cure them, they make them worse. Put
therefore into the Eye, a little of *Tutia* prepa-
red, and Sugar-candy, with a little dried Fish-
bone, called *Sepia*, in *English* a Cuttle, mixed all
together and reduced into a fine Powder.

C H A P. VII.

*Of the Blisters in the horny Membrane, cal-
led in Greek, Phlictænæ, in Latin, Pu-
stulæ; and of their divers kinds.*

P*hlictænæ*, are little hot Blisters arising in the
Skins of the Eye, but especially in the hor-
ny Membrane, to wit, between the Skins of it.
For it is most certain, that this horny Mem-
brane consisteth of four little Coats or Skins, in
regard whereof these Blisters are accounted of
divers kinds. For when they grow under the
first Skin, the Humour flowing between the first
and the second, then is the matter of the Blister
more Black: It is at other times between the se-
cond and third, or third and fourth, and the Bli-
ster seemeth more white, albeit it is hidden in
the bottom of the horny Membrane. Now the
natural Colour of the Blister is black, but the
Membrane is white, resembling Horn: There-
fore by how much deeper the Blister is hidden
in the Membrane, by so much more it repre-
sents the colour of it being most grievous and
tormenting, and in danger to make an ulcera-
tion, by breaking through the Membrane, where-
upon may ensue an utter loss and decay of all
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the Humours. Those therefore which are in the overmost part of it, are less dangerous. For the most part they owe their rise to cholerick sharp corroding Humours, or to a thin malicious Humour running between the aforesaid Skins. In the general Cure, the Patient must be careful to be quiet, to beware of much light, to use little Speech, to keep his Belly loose. Concerning *Topick Medicines*, he must use emollient Cataplasms, such as are used in violent Inflammations, which must cover not only the Eye, but also the Temples, Forehead, and Cheeks, renewing them often, lest they become too dry. *Aetius* appoints this Remedy: Take the white and yolk of an Egg, beaten with Saffron, and a little juyce of Poppey, a small quantity of Wine and Bread: In like manner you may use sodden Quinces. According to these Medicines you may order such a Cataplasim: *R. Micæ panis albi in passo vel lacte tepido macerat. ℥jv. pulpæ cydonior. coctor. sub cineribus ℥ij. croci 3 j. opij 3 ss.* Make it up into a Cataplasim, adding to it the white and yolk of an Egg. The Ointments to be put into the Eye, must be made of the Mucilages of Quince-seed, and Flea-seed, drawn in Milk, or Rose-water and Plantain. After the Heat is asswaged and the Pain mitigated, you may add to it a little Myrrh, Frankincense, and Saffron. *Celsus* praises this *Collyrium*: *R. Myrrh. papaveris lachrim. an. 3 j. plumbi elot. terra samia, tragac. an 3 jv. stibii cocti, amyli an 3 vj. spod. elot. cerusæ elot. an 3 viij.* Put them into Rain-water, use your *Collyrium* with an Egg, or Milk.

C H A P. VIII.

Of the Ulcers in the horny Membrane, called generally in Greek, Elcos, in Latin, Ulcus: Also of the divers kinds, as Mistiness, in Greek, Aclis, in Latin, Caligo, Cloudiness, in Greek, Nephelion, in Latin, Nubecula, the round Ulcer, in Greek, Argemon, in Latin, Ulcus rotundum, the fiery Ulcer, in Greek, Epicauma, in Latin, Ulcus inustum, the Pit, in Latin, Fossula or annulus, in Greek, Bothryon, hollowness, in Greek, Coiloma, in Latin, Cavitas, the filthy Ulcer, in Greek, Egcauma, in Latin, Ulfus Sordidum.

ELcos, is taken generally, for any Ulcer in any part: But Galen applyeth it to the Eye. The antient Physicians have left us seven kinds, whereof four are in the uppermost part of the horny Membrane, which may be named outward, and three are inward in the bottom of the same Membrane. The first of the outward Ulcers is called *Achlis*, which resembleth Smoak, or a misty Air, of a Sky-colour, lying upon the Black of the Eye, and possessing a great part of it, and after it hath gained the Apple of the Eye, the Patient sees very little. Some suppose it to be a Black Scar, which begins to darken and dim the sight. The second is called *Nephelion*, like to the former, but more
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deep and white, occupying less room, because it is not so far extended nor raised up so high, yet it hindreth the sight. The third is called *Argemon*, which is a round Ulcer in the white of the Eye, near unto the Circle named *Iris*, or the Rainbow: It is white, near to the Apple of the Eye, and red in the Membrane *Conjunctiva*. *Galen* affirmeth it to be an Ulceration appearing white in the black of the Eye, and red in the white of it. The fourth is called *Epicauma*, being a fiery boiling Ulcer, rough, of an Ash colour, lying upon the Apple of the Eye, as if it were a flock of Wooll. Notwithstanding *Aegineta* taketh it for a deep, filthy, and crusty Ulcer. Besides these, there are three other inward and deeply settled Ulcers. The first is named *Bothryon*, which is a little straight deep Ulcer, like to a prick without filthy matter. The second is *Coiloma*, like to the former, but larger, yet not so deep. The third is *Encauma*, being a filthy and crusty Ulcer, out of which cometh most vile, stinking slimy matter, so that it can hardly be kept clean. Concerning the Cure, although some Ulcers be little, yet if they be not well handled, or neglected, they prove malicious. And in what place soever the Humour is sharp and corroding, there happeneth *Elcosis*, that is, a bursting or Rupture of the horny Membrane; by means whereof, either all the Humours, or part of them issue out. This may also chance by an Inflammation. After the general Cure, consisting in Blood-letting, purging, cupping, rubbing of the shoulders, the Chyrurgion shall carefully consider whether there be any Inflammation, as sometimes it happeneth, that he may ease it with the Medicines set down before

before, in *Optthalmia*, or in the Inflammation of the Eye. If the Ulcer be in the left Eye, the Patient shall lye upon his left side, and on the contrary. And according to the filthiness of the Ulcer, it shall be cleansed with Medicines proper for that purpose. As for instance, with this: Take of Water, of Eye-bright and Plantain an. $\mathfrak{z}$ j. Syrrup of Violets $\mathfrak{z}$ j. *fs.* of Sugar-candy $\mathfrak{z}$ ss make a *Collyrium*. If more cleansing be required, you must use this: Take of Betony and Bugloss-water *Ana.* $\mathfrak{z}$ j. *fs.* of Honey of Roses, and Syrrup of Worm-wood, *Ana.* $\mathfrak{z}$ ss, of Myrrh and Aloes, *Ana.* $\mathfrak{z}$ j. make it up into a Salve. The Mucilage of Fenne-greek is most profitable, if you add unto it a little Syrup of dried Roses. When the Ulcers are cleansed, you must use drying Medicines, made of *Olibanum*, *cerusæ lotæ amili*, gum. *tragac. plumb. ust. & litharg.* *Celsus* used this Medicine to cleanse and dry: $\mathfrak{R}$. *eris combust & eloti, mirrh. gum. ana.* $\mathfrak{z}$ ij. make it into a Salve. This Ointment may be dissolved in Rose-water, and the Mucilages of Flea-feed, Quince-feed, Fenne-greek drawn in Eye-bright, or Plantain water.

CHAP. IX.

Of the malicious eating or corroding Ulcers, called in Greek, Nomæ, in Latin, Ulcera Depascentia.

NOMÆ are malicious Ulcers, which partly begin at both the corners, partly at the white of the Eye, and sometimes at the horny

Membrane. They corrode the Eye suddenly, especially in Bodies of an ill habit : There issueth out of them a great quantity of most stinking viscous matter, with exceeding pain : It is attended with a Feaver, and oftentimes with a Bloody Flux. They encrease to such a degree, that oftentimes they consume the parts next adjoining the Eyes, as the Muscles and Eye-lids. In the Cure, the Patient shall use good Diet, and keep his Belly loose : If the Veins and Arteries in the Temples seem repleated, it will be expedient to let them bleed : And for the Eye, the Ointments prescribed in the preceding Chapter may also be used here. But if these Ulcers creep further to other parts beside the Eye, then take *Scoria ferri*, *Cerusa*, *Plumbi* : Wash them altogether with Womans-milk, make them fit for your use, applying them with Pomaton, or Oyl of Roses, in form of an Ointment. Now if these gentle and easie Medicines do not stop the Ulcer from going further, then *Oleum vitrioli* is to be used, which I have seen to stay the progress thereof with good success. If necessity requires, this Cataplasme is much commended by the antient Writers : *Videlicet*, take two Quinces, four handful of Nightshade, as much Housleek, seeth them in Womans-milk.

C H A P. X.

Of the crabbed, or as it is commonly called, *Cancrous Ulcer*, in Greek, *Elcos Carcinodes*, in Latin, *Ulcus Canceratum*.

E*lcos Carcinodes*, are little Ulcers happening in the Black of the Eye, (which cannot be closed) very painful, full of swell'd Vessels, as in the Disease called *Varix*: And sometime when they seem to be closed up without any manifest occasion, they open again, and become Ulcers. They may be distinguished by wandering and running pointed Lines, which go to the Temples, by a sharp and thin course of Humours: The white and black of the Eye are always red, the Patient refuseth his Meat and Drink, and the grief and pain is much encreased by the use of sharp Medicines. This Distemper is incident, many times, to old People by reason of some great Inflammation, and to Women whose Months are stopt. In the Cure of it, the antient Physicians do advise the Chyrurgion to foretel, that the sick party cannot be fully and perfectly cured: The chief Cure must be therefore to assuage the pain by good Diet, Purging, Cupping, the Seton and Searing applied either behind on the Head, or upon the Arm, to the end that the Flux of the Humour which might increase the Disease, may be stayed and diverted.

Amongst the Topick Remedies, the white of an Egg beaten with Womans-milk is praised by many: Also Lintels sodden and steeped in

Plantain-water, or Juice, the Mucilages of Quinces and Lin-seed often renewed. But where you find violent pain and Inflammation, there you must use the Cataplasms set down in the Chapter which treateth of *Ophthalmia*, or the Inflammation of the Eye, that by this means the grief may be mitigated.

C H A P. XI.

Of a Scar in the Cornea, or horny Membrane, called in Greek, Oule, in Latin, Cicatrix: Also of its divers kinds, as the Spot in the Eye, commonly called Aigis, and Leucoma, in Latin, Albugo: Of the white shining Scar, in Greek, Paralampsis, in Latin, Cicatrix Splendens.

ALthough *Oule* be used generally for a Cicatrix or Scar in any part; yet *Galen* taketh it for a white high Scar upon the Horny Membrane, proceeding from a deep Ulcer: It may also happen in the white of the Eye, but not so plainly to be seen. The kinds thereof are *Aipis*, and *Leucoma*, when the Scar in the horny Membrane is thicker and higher then in the former, arising from a larger Ulcer than the former, possessing sometimes the Circle *Iris*, or Rainbow. Some assign this defect to the Chrystaline Humour, which is wholly made white. *Paralampsis* is a Scar on the Black of the Eye, more hard, gross, and shining then *Aigis*. In
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the cure you must consider whether they be hollow, or standing up. If they be hollow, *Celsus* useth this *Collyrium* to fill them up.

℞. *Lachrym. papau. sagap. opopon. an. 3 ij. & ruginis 3 iv. cumini 3 iv. piperis 3 xij. cadmiæ elotæ, & cerus. ana. 3 vi.* make them up into a Salve. *Ætius* advises not to attempt the cure of very hard, gross, and old Scars, since they cannot be removed but with sharp Medicines, which will cause Exulceration in the parts adjoining: But on the contrary, others may be diminished with gentle cleansing Medicines, as *as ustum squama æris, flos æris, calchitis ustæ*, which must be washed and prepared, that their sharpness may be allay'd: Mares Milk with a little Honey is commended. *Celsus* appoints this *Collyrium*. ℞. *gummi 3 ij. ærug. 3 i. crocomag. 3 iv.* make of these a Salve. It is a most singular Remedy, to cause a little Child, or some other Person who hath a clean Tongue, to lick the Scars, which are not over-hard and gross.

This Salve was given unto me for an undoubted Experiment: Take a Pint of White-wine, wherein you must put an Ounce of *Tutia* well prepared to steep, half an Ounce of *Myrrh*, as much *Aloes*, two Ounces of Sugar-candy, let it all stand soaking or infusing in a Glass-bottle in the Sun, for the whole space of the Dog-days. Others distil this Water and put some drops of it into the Eyes. Now to alter and change the black Scars into white, such Medicines must be used as have Vertue to bring blackness unto it; as Galls, the Pills of Pomegranate, *nux cypress, vitriolum, lithargi, plumbum, ustum, calx lota*, Sage: Of these, or such like, you may appoint this Remedy. ℞. *calcis lotæ 3 ss. litharg.*
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utriusque 3j cum decocto gallarum, nucum cypresse, & salvia, make up your Medicine. Although the ancient Physicians do use these Remedies, yet I have not seen any great Effect of them; nay, I have found rather more hurt than help by them; insomuch that the white of the Eye hath been changed into black: For it cannot be otherwise, but that the Medicine which is applied to the horny Membrane, should flow upon it. Therefore those that will use them, must be very careful to wash their Lime well, to avoid danger.

C H A P. XII.

Of the Eye full of Matter or Corruption, called in Greek, Pyosis opthalmou, in Latin, Oculus purulentus: Of its kinds, which are a Nail or Web, in Greek, Onix, in Latin, Unguis, a putrified Eye, in Greek, Hypopyon, in Latin, Sanies in oculo.

P*Yosis opthalmou*, is a congeries, or lump of slimy Matter, with Inflammation in the black of the Eye. The ancient Physicians tells us of two kinds, whereof the first is named *Onix*, which is when the Corruption or slimy Matter is gathered by a deep Ulcer, between the Skins of the horny Membrane, and discovers it self in the Apple of the Eye, about the Circle *Iris* or Rain-bow, like to the pairings of Nails. The second is called *Hipopyon*, when the corrupt

rupt Matter appears in great abundance, so that it possesseth one half of the black of the Eye, or shineth thro' the horny Coat, which covereth the whole Apple of the Eye. This affection may arise not only of an Ulcer, but also of a violent pain in the Head, or inflammation in the corrupted Eye. And besides this Inflammation, it may be produced from great abundance of Humours, which open the Mouths of the Veins; also by a stroke or fall, which may force the Blood to disperse and extravasate, which turneth to suppuration, or a slimy Matter, when it is out of its proper Vessels. In this Disease the Patient feelth violent throbbing pains, the Eye is red round about, and about the Temples he feels much pain. To obviate these Inconveniences, the Party must with all speed be let Blood in the Arm, in the Temples, in the corners of the Eyes: If it be possible, use Cuppings upon his Shoulders, and proper Remedies to stop Inflammations; and that for the space of two or three Days, or as long as necessity requires. After this you must use discutient and anodyne Remedies, such as assuage pain, such as this is, which for its excellency is called in Greek *Isotheon*, in Latin, *Par Deo*, it may be called in *English*, a divine Remedy. ℞. *Cadmæ* ʒ viij. *arisusti* ʒ iv. *rosarum siccar.* ʒ iv. *croci* ʒ j. *folii* ʒ j. *lapidis scissi* ʒ i. *Myrrh* ʒ j. gum. ʒ vj. beat them up with sweet Wine, and use them with an Egg. If all these Medicines fail, and the Eye continues full of Matter, then must you take the following course. Let the Patient be set conveniently, having one to stay his Head; let the Chyrurgion hold his Eye with one hand, with an Instrument called *speculum Oculi* (of which you may see the Description

tion and Draught in *Ambrose Pare*) and with the other hand, with the Point of a Launcet, he must dextrously pick the horny Membrane, until he come to the slimy Matter, which by little and little will be voided. After this Operation ended, he shall use Medicines which have Vertue to repel and mitigate pain, as the white of an Egg beaten with Rose and Plantain-water: and then apply the Remedies before prescribed against Ulcers, which may cleanse, increase Flesh, and close them up. This practice I have seen performed by *Ambrose Pare*, the King's Chyrurgion; which he performed most excellently, being then at the Age of threescore and twelve Years: And according to his Example, I have twice practiced the same without any hurt, but with great comfort to the Patient. The Chyrurgion must be cautious least Flesh grow in the incision of the Membrane, which must occasion both hurt and deformity to the Party. To prevent this danger, this *Collyrium* is much commended, as also against an Inflammation: *R. gum. arab. 3vj. spodii 3iv. thuris, myrrh. acatiæ spicnard, squamæ eris, opii an. 3j.* with Rain-water bring them to a perfect form, and then make them up into little round Balls, named *Trochisci*: When you will use them, wet them in the white of an Egg, with Rose and Plantain-Water.

C H A P. XIII.

Of the falling out or Rupture of the Membrane Uvea, called in Greek, Proptosis ragoides, in Latin, Procidencia : Also of its divers kinds resembling the Head of a Fly, in Greek, Miocephalon, in Latin, Formicalis ruptura, or muscæ caput. 2. Resembling a Grape, in Greek, Staphiloma, in Latin, Uvatio or Uvea : 3. Resembling an Apple, in Greek, Melon, in Latin Malum : 4. Resembling the Head of a Nail, in Greek, Elos, in Latin, Clavus.

Proptosis is here taken for a starting or falling out of the Membrane named Uvea, when the horny Membrane is either loosed or broken : And as this Disease appeareth greater or less ; so there are numbred divers kinds thereof, their names being given them from the likeness of things which they do most resemble, as Miocephalon, when the standing forth of the Skin is little, like unto the Head of a Fly.

Staphiloma is of two sorts ; whereof the first is, when the horny Membrane is lifted up, or drawn awry, either by some Humours gathered between the Skins of it, or rather because a Wheal is engendered amongst those Skins, which may happen without any Breach to the horny Membrane. This kind of Staphiloma, causeth a proeminency like to a Grape, not in colour, for it is not black, but in roundness and whiteness, as it were an unripe Grape.

The

The other sort of *Staphiloma* is, when the horny Membrane is by an Exulceration fretted asunder in such sort, that the Coat or Membrane call'd *Uvea*, flippeth forth, and maketh a round swelling or Tumour, resembling a black Grape, when it is ripe. It is called *Melon* when the *Uvea* issueth forth a great quantity, so that it over-reacheth the Eye-lid, representing an Apple hanging by the Stalk. *Elos* is, when *Uvea* being so far thrust out of the Eye-lids, becometh hard, and the horny Coat round about, being become callous, presseth it down, as if it were the Head of a Nail. Whatever maybe the case of this Disease, it bringeth with it two Dangers and Inconveniencies, whereof one doth impair and decay the sight, the other doth deform and disgrace the Face. If the sight be lost, there is no recovery; if it be only a deformity in the Countenance, it may be helped, and chiefly by Chyrurgery. When the *Staphiloma* or *Grape* is new, and imitated by an Inflammation to lift up the horny Skin of the Eye, it must be cured by Ointments and Cataplasms appointed for the asswaging of Inflammations, and also by a good orderly Diet: But if the Flux of Humours amongst the Skins of the horny Membrane, hath raised this swelling, and therewith pain, you shall use the Mucilages of Fennegreek and Linseed, with a little Honey. When the Grief is somewhat allayed, *Ætius* commends this Remedy, to wit, a Cataplasm made of Bean-flower, and the Seeds of Roses sodden together in Water. You may in like manner make adstringent and comforting Fomentations, applying them warm, with this *Provisio*, to take care that too much heat draw not more Humours to the place

place affected. The *Collyrium* of *Theodotius* tempered with Liquor of Cole-worts, applyed very thick upon the Eye with a Sponge, and kept close with a Roller, consumeth and disperfeth this Tumour, if it be not of too long a continuance. And seeing *Ætius* reporteth such great Effects of it, I will here set it down. *R. cadmiæ lotæ, stibi loti, acaciæ gummi ana. 3 xxv. rosar. siccar. de purgat 3 xij. æris usti, mirrb. ana. 3 viij castorii, licii indici, croci, folii, spicæ nardi, chalcitidis tostæ, cerus. glancii seminis ericæ opii, gall, omphac. ana. 3 ij.* reduce them all into fine Powder, and frame thereof with Water, little round Balls. When you will use them, you may dissolve them, either with the juice of Cole worts, or with the white of an Egg. Another Medicine for *Miochephalon*. *R. cadmiæ squammæ æris, croci, an. 3 viii. opii 3 xii. misios usti, mirrbæ, acaciæ, gummi ana. 3 iv.* put them in Water. Now that kind of *Staphiloma*, which hath a deep and large bottom, and Veins full of Blood, is most difficult to be cured. Those which stand very far out, change colour, as that which is in *Uvea*, and are attended with vehement pains even to the Temples, are incurable. When these signs appear in *Staphiloma*, no other Remedies are to be used, but such as may ease the pain. But where the bottom of them is not narrow, neither the Ulcer of a malicious Nature, the Cure may be performed by binding and rolling thus : The Patient shall be so placed, that he may lay his Head upon the Chyrurgions Knees, sitting in a Chair. Then thrust through a Needle with a Thread, in the midst of the Root of the Tumour, beginning this Work at the corner of the Eye, and so piercing it unto the less : When the Thread

Thread is passed through, he shall cut off the Needle, that there may be two ends of the Thread in the same place, and take two ends there of in one hand, and two in another. This done, he shall knit one of the Threads, on a fast common knot, and afterward with a running Knot, to the end it may be more easily loosed at your pleasure: According to this manner you shall tye the other Thread. In continuance of time, these Threads, by little and little will separate and cut out the Tumour. And where the Tumour is gross, you may cut off the top of it, leaving only the Root, in which the Threads may be retained. For if they fall out, the Humours issue forth with the same, and the Eye sinketh down. Some are not contented with two Threads, but will have four. This part of the work thus accomplished, such Medicines must be applied as will mitigate pain, such are the white of an Egg, beaten in Rose-water, or Milk, or especially in the Blood of a Pidgeon, laying upon it a defensive to prevent inflammation, and other Inconveniences. When you will dress the Party, you must be careful, lest in removing the Cataplasin, you pluck away the Threads, which oftentimes are dried. Therefore make a little fomentation with Milk, which may moisten it, using the same Medicines, until the Threads of their own accord fall away, tying them straiter, if need do require. When they are fallen away you shall use gentle cleansing Medicines and such as increase Flesh: After them apply consolidating Remedies; whereof you have had divers Recipe's before, which may be altered as occasion shall require.

B O O K VI.

*Containing the Diseases incident to the
Apple of the Eye.*

C H A P. I.

Of the dilated or broad Apple of the Eye, called in Greek, Mydriasis, or Platycorasis, in Latin, Pupillæ dilatatio : Also of the displaced Apple of the Eye, in Latin, Pupillæ e loco remotio.

M*ydriasis* or *Platycorasis* is, when the Apple of the Eye doth not alter nor change its colour, but is larger than naturally it should be, extending sometimes upon the Circle *Iris*, or Rain-bow, whereby the sight is either much impaired or utterly lost. They that are troubled with this Disease, think every thing they see to be greater than really it is ; which Error proceeds from the scattering of the Spirits, at the excessive largeness of the Hole in the Apple of the Eye. Sometimes it is not only enlarged and extended, but it seemeth to be removed from the midst of the Eye, and to have changed its place, which in *Arnoldus*, is called, *Pupillæ e loco Remotio*. Now both these Diseases happen either

ther by a natural Disposition of, or by some other Cause. If they be natural and from the Birth, yet they hurt and hinder the sight. If they proceed from any other Cause, it is either outward, as by a fall or stroke; or inward by a conflux of Humours, which discharging themselves by degrees cause the Membrane *Uvea* to be extended; whereupon ensueth the dilatation of the Apple of the Eye. This Disease is hardly curable, because the Coat *Uvea* being much extended by its skinny Nature, in continuance of time becometh so hard, that it cannot be afterward easily reduced to a narrower compass. They, whose Eyes are naturally black, have also the Apple of their Eye large, and for that reason are subject to this Inconvenience. Some see very well, though they have this default from their Birth. Concerning the cure, it consists generally in good Diet, Purging, Cupping, Rubbing, Blood-letting, both in the Arms and Corners of the Eye; and particularly in the use of adstringent and strengthening Medicines, as Fomentations and Ointments made *ex rosis, croco, nardo, thuris cortice, pompolyge, spodio, acacia*, but be careful to avoid sharp Medicines, because they attract abundance of Humours, which more and more extend the Apple of the Eye. But you must be no less circumspect that your Medicines are not too adstringent, least on the contrary the Apple of the Eye be rendred too strait and little. *Avicen* commends this *Collyrium*. Take of the Gall of a Kid, and Crane, of each three Dramms, of Pepper one hundred and seventy Grains, of Juice of Liquorice five Dramms and an half, of Sal-Armoniack two Dramms, as much Honey as is sufficient; reduce them all
first

first into a fine Powder, and then add to them Fennel-water, and with Honey make them up into little round Balls.

C H A P. II.

Of the consumption of the Apple of the Eye, called in Greek, Pthifis opthalmou, in Latin, Tabes oculi.

P*thifis*, is used generally for all kind of decaying and leanness ; notwithstanding which, it is used also in ancient Writers for that affect of the Eye, when the Apple of it is narrower and weaker than ordinary. This default, (saith *Avicen*) may owe its beginning to its first Structure ; and they which have the Apple of the Eye very little, are most sharp and quick sighted. When this affection is not natural ; it may owe its cause to the dryness of the Membrane *Uvea*, which is withered and contracted, or to an abundance of moisture descending upon the same, which renders the Edges and Borders of the Hole so large, that they touch each other ; and consequently become more narrow ; as we see in a Sieve made of Parchment, which being wet, the Holes thereof are closed up. Moreover the defect of the waterish Humour may procure this Disease, which being dryed, becometh less, and thereby the Coat that covereth it, is also made narrower. It may also be produced through great weakness and a violent Head-ach. To those that labour under this affect, all things appear greater than really they are ; and in effect,

in all weaknesſes of the ſight, the objects are greater in appearance, but not ſo plainly diſcerned ; which Error happens by the conſtriction or ſmallneſs of the Apple of the Eye. The Method following muſt be obſerved in the cure : If this Diſtemper proceeds from Moiſture, it muſt be cured by contrary Remedies. It is convenient to rub the parts above it, and alſo the Eyes with the Fingers, to waſh the Face and Head, to rub and anoint it with Oil of Flower-deluce. In like manner uſe ſome ſharp-biting Ointments which may draw moiſture unto the Eyes, as this *R. Ammon thimiamat. ʒj. crocomag ʒ iv. croci ʒij. arug. ʒiv.* put them into Water and beat them together ; afterward make them fit for your uſe. If dryneſs is the cauſe of it, *Avicen* adviſes to uſe a moiſt Diet, and to the place you muſt apply this Ointment. *R. piperis, ammoniac. ana. partes ii. olei balsami unum part. i. croci part. i.* diſſolve the Sal-armoniack, with Fennel-water, put upon it *Oleum balsami*, and then with Honey make up your Medicine. The Author recommends this as a moſt ſingular Remedy ; but in my Judgment, I would in place of *Oleum balsami*, take good Venice-Turpentine.

C H A P. III.

Of the Web or Cataract, called in Greek, Hypochyma, in Latin, Suffusio Gutta, Aqua, Imaginatio.

H*ypochyma*, is a congeries of superfluous Humours coagulated like a little Skin between the horny Membrane and the Chrystaline Humour, directly upon the Apple of the Eye, swimming above the waterish Humour in that place which *Celsus* affirmeth to be void and empty. It hindereth the sight, or at least, the discerning and judging of such things as are before our Eyes. *Fernelius* appointeth the place of it between the Membrane *Uvea*, and the Chrystaline Humour. The differences of it, are borrowed from the quantity or quality. From the quantity, when it is whole, covering the whole compass of the Apple of the Eye, in such a manner that the Patient cannot see any thing. Sometimes it covereth only one half of the Apple of the Eye, or some part of it, either above or beneath, or in the midst, in such manner, that that part only of the thing before our Eyes can be discerned, which is placed against the part of the Eye that is free from this Disease; whereby it falleth out oftentimes, that either the Patient seeth nothing, or only some part of things. For if that which is offered to the sight be set directly opposite to the part affected, he seeth nothing; but if he pry at it with that part of the Eye which is sound, he may discern clearly. Now if the Spot or Web be in the midst of the Eye, not

touching the edges or borders thereof, like a prick in the midst of a circle, then the Party seeth only the extremities and edges of things. The differences depending on their different qualities, are either from their essence and substance; for some are thin, slender, and clear, through which the light of the Sun may be discerned: Others are thick and gross, or from their colour, for some are like brass; others white, like Plaister, or Pearls; others pale-coloured, like a mixture of green and white, or green and yellow; others like Gold, others black, others of an Ash-colour. Amongst the *Arabians*, *Cataracta suffusio*, *aqua*, *gutta*, *imaginatio*, are used for the same things: Herein only is the difference, that *imaginatio* is called by *Avicen*, *Gutta zala*, as it were the beginning of a Web or Cataract; because we imagine we see that which indeed we see not, when the Cataract is as thin and slender as a Spiders Web. It is then named *Aqua* and *Gutta*, when the Cataract beginneth to receive some form in spreading it self like Water; but when it is thick and ripe, and harder, it is called a Cataract, and by *Avicen*, *Gutta obscura*. The causes hereof may be a fall, stroak, heat, cold, pain; by whose means the Humour is drawn and gathered thither, or rather Vapours and Humours ascending to the Brain, and from thence descending to the Eyes, which in process of time, and by reason of the external cold, are changed into Water, and at last become thick and congealed. In the same manner this Disease may proceed from ill digested nourishment in the Eye, or if the nourishment be good, yet the superfluity of it may prove pernicious, it being an excrement of the third digestion.

Fernelius

Fernelius thinketh the cause thereof, to be a flux of humours descending by little and little upon the finew of the sight, which in the beginning cannot be perceived, notwithstanding he boldly affirmeth to have seen a Cataract made and framed in one Day. For (saith he) if at one Moment a gross slimy Humour falls upon the finew of the sight, and thereupon ensueth the loss of the whole sight, why may it not suddenly engender a perfect Cataract, if before there has been a Flux upon the Apple of the Eye? In the beginning of a Web or Cataract these Signs and Symptoms are incident to the Patient: They imagine to see swimming before their Eyes little dark things resembling Flies: Others suppose they see Hairs, others Threads of Wooll, others Spiders Webs, others think they behold a circle about the Light of the Candles, and sometimes two Candles instead of one. If you perceive these Symptoms, and you look upon the Apple of the Eye, it appeareth clear and pure at first sight; but if you behold and view it more nearly, it will appear somewhat troubled or cloudy; and if you compare it with the other Eye which is sound, it will appear somewhat apalled. It resembles sometimes the colour of the Sea, as the Disease increaseth. Concerning the prognostication, those which are like to rusty Iron or Pearls, or have a Green or Ash-colour, or resemble a *Turquoise* or Sea-water, are fit to be couched: On the contrary, those which appear like Chalk, Lead, Citrons, Black or Yellow, cannot be couched with a Needle. Besides their colour, the substance is to be examined, whether it be fit and prepared: For that which is enlarged and spread, without being

separated into pieces, returning to his former figure and greatness, is known to be curable by its ripeness. But if it be scattered into pieces when it is spread, it is not yet ready nor fit to be couched. Neither may you meddle with that kind which is not spread in breadth and largeness, being an evident sign that the sinew of sight is obstructed, whereby the Spirit which causeth sight should be conveyed thither; for this is but lost labour, the Patient would not see any thing the better, though that were removed. Thus you may try the Cataract; if the Eye being shut, rub gently upon the Eye-lids with your Fingers, turning it sometimes to one side, sometimes to the other, and then lifting up the Eye-lid suddenly, consider if the Cataract do spread abroad and return again presently or not. The same observation you may take by closing the other Eye, wherein is no Cataract: For in thus doing, you will perceive the Spirits enlarged, in that which ought to have been carryed to both the Eyes.

That Cataract is the worst, which owes its cause either to great Sickness, or extream Pain in the Head, or to a grievous stroak or wound. It is incurable in old Men and Children, which without this imperfection commonly have their sight decayed. Concerning the Cure; if it be in the beginning of the Disease, you must endeavour to prevent the further increase thereof by a good orderly Diet, and by Phlebotomy in the Fore-head, Temples, and Arm, by Purg-
ing, Cupping, Cauterizing, applying of a Seton, and other Remedies, such as Masticatories or Chaws, Stemutatories or Snuffs. Touching particular Remedies, the Ointments following
are

are highly commended: *Rx. terebinth lib. ss. sulph. vivi ʒ ij. mellis ros. ʒ iiij. plantag. & arnogloss. euphras. chelidon. ana. m. ij.* let them be altogether distilled in an Alembick of Glass, or this: *Rx. zinzib, cinamon, carioph nucis mosch. gran. parad. ana. ʒ ij. ss folior. salvia, m. ij. cardam. mastic. cubeb. galang. rorism, majoram, lavend. meliss. beton an. ʒ i.* let them soak in four pints of excellent Wine, for the space of ten Days, then distil them. Put two or three drops of this Water into the Eye, continuing order for a sufficient time. But if all the aforesaid means both general and special be not able to remove the Cataract, you must let it grow to its maturity, without applying any other Medicine unto it. When it is ripe, which may be known by the signs before-mentioned, then undertake the Work, but with this caution, to have a due regard to the time of the Year, wherein it is most fitly to be accomplished, which is especially the Spring time; next in Summer, and also if necessity require, and the Patient be willing, Winter, or the fall of the Leaf. But above all things, do not adventure to couch a Cataract, either on a rainy, windy, very hot, or very cold Day. For we have been taught by experience, that the couching of them at such a time, occasions great, nay almost intolerable pains in the Head. Therefore when you have chosen a convenient time, the Patient must eat little, and drink Water, or some other small drink, abstaining from Wine for the space of two or three Days before you attempt the couching of it, and especially on the Day before, his Diet must be very sober and sparing. This being done, let him be set in a light place, with

his Face turned toward the Chyrurgion, and the light falling directly upon him, let one hold his Head stedfast without moving; for the motion may occasion a blindness without recovery. The Chyrurgion must have a higher seat than the Patient. The affected Eye must be kept open, and the sound Eye covered with a little Linnen-cloth. Let the Chyrurgion rub the right Eye with the left Hand, and the left Eye with the right Hand, before he begin his Work, or rather let some Child having a very clean Mouth, chew Fennel or Annis-seeds, which when he hath spit forth, let him breath upon the diseased part, that by this means the Cataract may be made more thin, and pliable. When you have proceeded thus far, bid him turn the Eye which hath the Cataract, toward his Nose, as if he would look upon it and presently put your Needle unto it, which must be sharp-pointed, not slender, flat, nor round, to the end it may enter and pierce more easily, and that the roundness thereof cause is not to slip upon the Cataract: Then thrust it straight inward, or overthwart the Membranes named *Conjunctiva* and *Cornea*, in the midst of the black of the Eye, at the corner which is next to the Temples, guiding and directing it upon the midst of the Cataract, so that no Vein may be hurt: Nevertheless you must thrust boldly without fear, since the place is there void, lest after it be entred in, the Chyrurgion, though never so skilful, be deceived if he lift it up with the Needle, and perceiveth nothing to resist it. Now when the Needle is thrust through, it must be stayed on the top of the Cataract, and by little and little turned gently, to bring the Cataract toward the lowest
part

part of the Apple of the Eye : And when it is couched there, you shall press it down very hard, that it may abide in that place. If it remains there, the Cure is perfect ; but if it ascends again, then with the same Needle, break and cut it into many pieces, which will cause less hindrance, and require less room. After this, draw out the Needle, and lay within the Eye the white of an Egg, with a Linnen cloth folded together, and without apply something to prevent Inflammation, binding it up with a roller. The couching being ended, the sick party must remain quiet without stirring, lying in his Bed, without moving his Head any way, or very little, and abstain from seeing any great light for a certain time, as also from Meat, supping only thin Broth for the space of six or seven Days, without chewing any Meat with his Teeth, because it might draw down the Humours to the Eye, and make the Cataract ascend again. After the Inflammation is ceased, you shall order the Patient after the same method as if he were grievously wounded. He must not be dressed, nor the Eye unrolled, until the second or third Day after the couching of the Cataract, unless there happen any Inflammation, or excessive pain. When you will dress it, shut the Windows, and set a Candle lighted behind him, and not before his Eyes, or rather far off from him on one side, lest the great light suddenly offered to his sight, should trouble the Eye, and stir up the Cataract. Now, sometimes in couching of Cataracts, there happens a Flux of Blood within the Eye, in such sort, that the Humours seem to be all red. This ariseth of Blood issuing out of some little Vein, or Artery which is cut or prick'd : This
Blood

Blood mingling with the waterish Humour, imparted to this red colour, so that the Chyrurgion, if he have not seen the like Symptom before, as well as all that stand by, would judge the Eye bursten and utterly lost: Notwithstanding, about two or three days after, when the Patient is to be dressed, this Blood will be so wasted, that not the least remnant thereof will appear. There are some Cataracts which vanish and scatter, as soon as the Needle is applyed to couch them, because they are not hard and solid enough to bear the Needle, which passes through them: they are commonly called, *Cataracta lactea*, because their colour and Substance resembles Milk. That the Chirurgeon may obviate this inconveniency, he must indeavour to loosen it, pressing it with his Needle on every side: For by this means I have seen and experienced sometimes the grossest part of the Cataract to fall away, and come lower, the thinner part to be loosed and consumed, and in the end the party hath recovered his sight. *Albucasis* writes, that it was reported in his time, one had devised to pick the Eye with an hollow Needle, and by the hollownes of it, he could raise up and draw forth the Humour of the Cataract. Notwithstanding I think he might sooner raise and draw forth the Waterish Humour than the Cataract, when it is ripe and ready to be couched, because it is an hard skinny substance.

B O O K VII.

*Treating of the Diseases incident to
the Humours of the Eyes.*

C H A P. I.

*Of Green, Pale, or Gray Eyes, call'd in Greek,
Glaucoma or Glaucofis, in Latin, Glauco-
ma or Cœsi oculi, and by the Interpreter of
Avicen, Viriditas oculi : Also of the Wolves
Eye, or Curst-Eye, in Greek, Æthemoma,
in Latin, Ravi Oculi.*

Glaucoma is used in a double Sense : For it is taken improperly for a Web, Cataract or Spot which is gathered and dryed round about the Apple of the Eye ; in which signification some of the old Physicians have used this Word, as *Ægineta* tells us, that the ancient Writers have supposed *Glaucoma* and *Hypochyma* to be one and the same Disease, which have been distinguished only by the new Writers. Neither doth *Galen* much dissent from this Opinion, affirming *Glaucoma* to be like to the Web or Cataract, and that both of them may be comprehended under the same Name. Nevertheless (as *Gorræus* well observes) it followeth not that they
are

alike. For the Cataract is a collection or a congeries of other Humours, than of those which are naturally in the Eye, flowing unto it from some other place: But *Glaucoma* is properly used when the Chrystaline humour is dry and thickned and the colour of it green, whereupon the Eyes appear green or pale. Moreover, the Cataracts are always so great, that they over-spread and cover the whole Apple of the Eye, and hinder the whole sight: but *Hypochyma* possesseth all the Chrystaline Humour, and it is dry in every part, and by reason of its dryness it becomes so thick. Besides these Cataracts may be cured, but *Glaucoma* is uncurable, when it hath once attained to perfection, as *Aegineta* writeth concerning the opinion of *Rufus*. When this affection is only found in one Eye, it is called in Greek, *Heteroglaucosis*, as if that Party had unlike and quite different Eyes. There is incident to the Chrystaline Humour another Disease, named in Greek, *Argyrias*, in Latin, *Albedo in Christalloide*, being a white spot growing upon the Chrystaline Humour, which is easily perceived if you look upon the Eye: It impairs the sight more or less, according as it is greater or smaller, and may be accounted the beginner and messenger of a *Glaucoma*. In antient times, and even in our Days also, green or gray Eyes, called in Greek, *Glauci*, in Latin, *Cæsi*, were much commended in Women, wherefore *Minerva* is always surnamed *Glaucopis* in *Homer*, that is, having green or gray Eyes. Although *Aegineta* assign the cause of this Disease unto a superfluous Moisture, yet *Galen* and *Hippocrates* impute it to dryness; for which cause old people are subject unto it. Some have imagined that a green colour intermix'd with

with the Chryſtaline Humour, cauſes this Diſeaſe, and produces this gray or azure colour, called *Glaucoma*. The Cure is to be undertaken in the following manner : In the beginning of this Diſeaſe, which is evident by the Chryſtaline Humour appearing ſomewhat gray, firſt uſe general Remedies, then ſuch Medicines as may comfort and ſtay the Chryſtaline Humour, leſt it become dry and congealed, *viz.* moiſt and comfortable Fomentations : R^x of the tops of Mallows, Holyhock, Violets, *ana.* m. i. Eye-bright, Celandine, an. m. ſs of Camomil Flowers, and Melilot, an. p. ſs Lin-feed, 3 ij. Fennel and Annis-feed an. 3 i. boil them together for a Fomentation. This *Collyrium* you may put into the Eye. Take of the Mucilage of Quince and Lin-feed drawn in water of Pellitory of the Wall, *ana.* 3 i. of Fennel and Eye-bright water *ana.* 3 ſs. diſſolve therein of Myrrh and Aloes, *ana.* 3 ſs of *benzoin* and *ſtorax calamit*, *ana.* 3 ij. make an Ointment of them. Theſe before-named Ingredients may alſo be diſtilled, and the Water of it will be very profitable. Thoſe Medicines which have a vertue to diſſolve Cataracts and Webs in their beginning, may be in this caſe alſo uſed, with diſcretion, as alſo hot Bread taken out of the Oven, wherein is baked the Powder of Annis-feed and Fennel, may be conveniently applyed thus. Divide the Bread in the miſt, and lay it upon the Eye ſo hot as the party can abide it ; and let it thus remain upon the Eye for ſome time. The breath of a ſound and clean Perſon, which hath chewed Fennel or Annis-feed, is not unprofitable in this caſe. The diſtilled Water of Fennel and Annis feeds is moſt ſingular, if it be
wiſely

wisely used, and so are the mucilages of Quince, Fenne-greek, and Lin-seeds, drawn in the afore-said Waters. There happeneth to the Eye another affection, called in Greek, *Æthemoma*, in Latin, *Ravi oculi*, in French, the Wolves-eye, or evil Boy : And I think we call it in English, the curst Eye, or evil Eye, or sometimes greedy Eye, which is, when the Humours are all black, and thereupon the whole Eye becomes black. In the cure of this, seeing it differeth little from *Glaucoma*, you must have recourse both to general and special Medicines set down for that Disease. *Fernelius* mentions another Affect incident to the Eye, called in Latin, *Leoninus oculus*, the Lyons-eye, in French, the Brazen-eye, when the Eye is red, cruel, proud, resembling Sparks of Fire, as we behold in a Lyon, and in them which have the Leprosie. Seeing this affection is joyned with the Leprosie, before you adventure at the cure thereof, you must cure the Leprosie it self.



BOOK.

B O O K VIII.



*Containing the Diseases incident to the
Corners of the Eye.*

C H A P. I.

*Of an Aposthume in the great Corner of the
Eye, called in Greek, Anchilops, in La-
tin, Abscessus ocularis.*

A *Nchilops* and *Ægilops* are sometimes used for one and the same Disease, but most commonly are distinguished in this manner : *Anchilops* is a swelling or Aposthume between the great Corner of the Eye and the Nose, which is not opened ; but *Ægilops* is a *Fistula*, procured by means of this Aposthume. The cause is a gathering of thick gross Humours, like to Honey or Pulse, which is sometimes enclosed in a little Skin, increasing by little and little, but without any pain. This Disease is difficult to be cured, because of the delicateness and tenderness of the Bone, where the swelling is fix'd, and because of its nearness unto the Eye, which may easily be indangered by the same. Concerning the cure, as soon as the Aposthume appears, with all speed apply repelling Medicines : Of this kind
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and nature, is *Emplastrum contra rupturam*, *Unguentum de bolo, comitiss. desiccativum rubrum*, where unto you may add a little *Opium*. For these Medicines will quickly dissolve and disperse that which is gathered to that place. But if you see the course of Humours and Inflammation remaining, then such Medicines shall be applyed whose property is to resolve without sharpness, lest by molesting the Eye, the Inflammation be increased. *Ætius* appointeth this Remedy. *℞. thuris 3 viij. myrrh 3 viij. laudani 3 j. ceræ 3 viij. alumin. sciss. 3 iv. spumæ nitri 3 iv. coaguli leporis 3 iv.* beat these together, and with the grossest part of *Oleum Irinum* make them soft and fit for use. If in despite of all these Remedies, the Tumour comes to suppuration, open it speedily, that the Humour may run out; which if it be in a Bag or Skin, take the same away with dexterity; and if it cannot be taken away without danger, or hurt, consume it with pure Powder of *Mercury*, or rather mingle with it some cleansing Medicine, or such like. To render the cure the more perfect, and to prevent a relapse, some use to sear the edges of it. The remainder of the cure must be accomplished by this Medicine: *℞. Olei hypericonis 3 j. gum. Elemi 3 ss. Thuris, myrrh. an. 3 ij. sarcocol. 3 j.* melt them together and make an Ointment. If you perceive the Ulcer doth not heal, you must take care lest it turn to a *Fistula*, if the Bone be corrupted and rotten: And for this cause you must alter your cure as the condition of the Disease doth require.

C H A P. II.

Of the weeping *Fistula*, called in Greek, *Ægilops*, in Latin, *Fistula lachrymalis*.

Æ*Gilops* is a little *Fistula* in the corner of the Eye, near unto the Nose, out of which issueth continually a phlegmatick or thin Humour, arising from some former Disease, as of a suppurated *Anchilops*, either not speedily opened, or negligently dressed: Or rather it proceeds from a slimy matter, or moistning Medicines, or the Air which hath changed and rotted the Bone in that part. This Disease continually afflicts the Eye, being sometimes red, and piercing through even to the Nose. It hath in some the nature and properties of a Cancer, and in those the Veins are extended and crooked, the colour pale and blewish, the Skin hard. If it be touched as gently as is possible, is stirreth up Inflammation in the parts adjoyning. It is dangerous attempting the cure thereof, when it is of a cancerous or crabbed nature: For it hastneth the Death of the Patient. And it is lost labour to take in hand the cure of it, when the *Aposthume* toucheth the Nose, since it is never perfectly to be cured: Those which are in the corner of the Eye, are curable, but yet the nearer their Orifice or Mouth is to it, the greater difficulty is in the cure: That which is of short continuance, may be most easily healed: These things thus considered, and the Bone corrupted through long continuance of the Disease, and the

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Cure

Cure set down in the former Chapter not proving available, it behoveth the Chirurgion to enter into another course. Let him dilate the Mouth or Orifice of the *Fistula*, either with the point of his Launcet, or some other Instrument, or with a Sponge fitly prepared to open and enlarge the same. This done, let him place the Patient conveniently, and defend the Eye either with a Plate made for that purpose, whereof you have a description in *Ambrose Pare's* Book, or with any other thing commodiously prepared for that purpose. Afterward with an actual Cautery (as it is called) sear the Bone, and the parts which go cross within the *Fistula*, and especially the uppermost parts of them, because in that place there is a straight hollownes, whereout issueth a thin Humour like Tears into the Ulcer, from the higher and overthwart part. If this place should not be dried by searing, it would make the Ulcer too short, and thereby hinder the perfect closing up of the same. I have seen *Ambrose Pare* heal many with good success, in a short time, by whose example I have most happily practised the like. When this part of your work is done, you shall use a digestive made of Turpentine, and Oyl of Eggs: Apply within the Eye the white of an Egg beaten up with Rose-water and Plantain, whereupon lay a defensive, and continue the use of your digestive until the Scar be removed. Not long after, nature will cast off a little Scale from the Bone, where it was touched with the searing Iron; which, whether it be with matter, or without matter, let not the Chirurgion suddenly and rashly pull any part of it away, but wait the leasure of nature in disburthening it self of the
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the same. For whosoever will hastily and by force draw it away, especially before nature have brought forth Flesh between the sound Bone, and that which shall be cast off, he will cause a new Rottenness in the Bone. In the mean time, let the Ulcer be kept clean, then use Sarcotick Remedies: Lastly, close it up, when it shall seem expedient.

C H A P. III.

Of the Excrescency of Flesh in the great corner of the Eye, called in Greek, Encanthis, and according to Avicen, Additio carnis lachrymalium.

E*ncanthis* is a Tumour, or Addition of Flesh to that which naturally groweth in the great corner of the Eye near unto the Nose, or rather when the natural Flesh groweth beyond its compass. Of this there are two sorts: The one is most commonly tender, loose, without pain, red in colour, yielding easily to Medicines: The other is malicious, hard, rugged, blewish, with a pricking pain, not conquerable by Medicines, but only curable by the Hand of the Chirurgion. There are three principal causes of this Disease. The first is a conflux and gathering of Melancholy Humours, which make the Flesh in the corner of the Eye gross, as we see it in Warts. The second is, when the Flesh groweth out through ill management of an Ulcer which hath been in that place. The third is the remainder of an Nail or Web, which was not
L 2 fully

fully taken away, and therefore is degenerated and increased into a more gross nature. Concerning the cure, that which is little, gentle, not malicious, may be healed with only drying Medicines; as with this, commended by *Ætius*: *R. Aluminis usti, myst. Combust. vitriol. an partes aequales*: Make your Medicine in this case; that *Collyrium* is most singular which we have set down before, for the Disease called *Micophalon*. I have seen the Trial of *Oleum vitrioli*, wherewith the part affected hath been touched; but first of all the Eye hath been sufficiently defended. Now if this Excrecence; of Flesh be large and malicious, but not of the nature of a Cancer, it may be taken away by Chirurgery in this manner: The Chirurgeon must put through the midst of it a thread wherewith it shall be lifted up, then with his Rasor or Cissers he shall cut it, being careful lest he cut any part of the natural Flesh adjoyning unto it. Otherwise he will bring unto the place of it a worse Disease, named *Rhaas*, which causeth the Eye to weep continually. When you have finished this work, you must apply unto it drying Medicines, to prevent the growing of the Flesh again, proceeding in perfecting the rest of your Cure, according to what is mentioned before in the Cure of the Web in the Eye.

C H A P. IV.

Of the weeping Eye, called in Greek Rhæas, or Rhæades opthalmou, in Latin, Fluxus oculi.

R*heas*, is a diminution or consumption of the Flesh, which naturally groweth in the corner of the Eye, with continual grievous Weeping. It ariseth either from an ill cure of the Web, *Fistula* or *Enchanthis*, when too much of the glandulous Flesh or Kernels which grow in that place, is cut away or consumed by Medicines: For hereupon the Tears cannot be stayed, but the Eye seemeth to weep always; so that the Cheeks are continually wet with the Tears. For seeing there is a double use of this glandulous Flesh, or Kernels, whereof the first is to stop the hole in the corner of the Eye which hath passage into the Nose, lest the Excrements which descend from the fore part of the Brain, upon the Bone, called *Os cribrosum*, because it resembleth a Sieve, should run into the Eye; and it preventeth the violent carriage of Air into the Eye, when we blow or snuff, or any way cleanse the Nose of that Excrement which it contains. The second use is, to cover the little corner Conduit in the corner of the Eye, by the which the Excrements and natural Superfluities are conveyed into the Nose. This Excrement is a thin liquid Humour, which floweth out in weeping, or laughing, and whensoever the Brain doth disburthen it self of these Superfluities. If this Humour be not much in quantity, and

comendable in quality, then the Kernels do receive, retain and keep it, to sprinkle it upon the Eye (as is the office of other glandulous Flesh or Kernels placed at the Root of the Tongue) to keep it moist and make it move more easily, which it could not do, if it were very dry; and it could not but be very dry, since it is moved continually, whereby it is made hot. But if this Humour contained in the Kernels, offend either in quantity, or quality, it bringeth forth Ulcers, Tears, and other Diseases before mentioned. Now when too much of the Flesh is taken away, either by cutting, searing, or corrosive Medicines, there is made not only a Scar in the place, but also the hole entring into the Nose remaineth open, through the which the Excrements of the Brain fall without any hindrance upon the Eye, which procureth continual weeping. In the Cure thereof, some use adstringent Medicines, to the end they may stop the hole, and cut off the passage: Others scarrifie the Skin round about, with incarnative or Sarcotick Medicines, (as they call them) labouring to restore and ingender new Flesh in the place of the former which was decayed: And when it is grown sufficiently, they close it up, and make it dry. But because this kind of cure is both hard and dangerous, many content themselves with closing up the hole, not regarding the restoring of new Flesh. These Men foresee not the manifold inconveniencies arising from the stopping of the Eye. For first, the passage of the ordinary Excrements unto the Eye is debarred. Secondly, since the Cicatrice is nothing else but a hard dried Flesh, by reason of the thickness thereof, it is not able to receive
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and imbibe these Superfluities : Hereupon insueth continual Tears dropping from the Eyes. Therefore in regard of this inconveniency, it is more expedient to adventure the generation of new Flesh, than only to close up the Ulcer.

C H A P. V.

Of fretting and itching Ulcers in the corners of the Eyes, called in Greek, Peribrosis, and Epinyctis, in Latin, Angulorum Erosio, or Pruritus Lachrymalium.

P*eribrosis*, is taken for a little itching Ulcer in the corners of the Eyes, and there is itching sometimes without appearance of any Ulcer. This Disease proceeds from a Salt Humour flowing unto that part, and there staying: Whereupon they which are troubled therewith, put their hands often to their Eyes, take delight in rubbing them, and suppose oftentimes that there there is sand, or some other such like thing in their Eyes. *Epinyctis* is used generally for little Ulcers growing of their own nature, resembling in the beginning red Wheals, wherein is found Bloody matter: In the day time they are not much painful, but in the night season, their Torments are more vehement than could be imagined to come from so small a thing. This pain beginneth usually about three or four Hours before Night, and continueth until midnight, at which time it ceaseth, in such sort, that the next Morning the Patient feelth either very little, or no grief, neither doth there

remain any thing, but a dry tough matter, wherewith the Eye-lids are tyed and joyned together, which you must help by anointing the edges and borders with *Unguent de tutia*. Nevertheless we, according to *Pliny*, do take *Epinyctis* in this place for an Ulcer in the corner of the Eyes, whereout issueth uncessantly a slimy matter. This Ulcer is more grievous than the former, because it is more filthy, malicious, and painful, especially in the Night, whence it got its Name. After the general cure, these Topicks may be used in *Peribrosis*: Take of the Mucilages of Quince-seeds, and Lin-seeds drawn in the Water of Plantain, and Pellitory of the Wall, ana. 3 j. of white Coperas dissolved in Rose-water 3 j. *ss* mingle them for your use. This water of white Coperas only I have try'd with very good success, but take care lest it be too strong. It is a Counterpoyson against great Itching, which doth so much vex the party, that *Ambrose Pare*, the King's Councillor and chief Chirurgion reporteth, he saw a Woman constrained to wash her Eyes with strong Vinegar, finding in it more ease and comfort than in any thing which she could use. Concerning *Epinyctis*, because it is a more filthy Ulcer, it must be diligently cleansed: for which purpose you must dissolve into the before-named Salve a little Syrup of Worm-wood, and Honey of Roses, or else touch the Ulcer with this *Collyrium*, which will not offend the Eye: Take of Rose-water and Eye-bright water, ana 3 j. Myrrh and Aloes, ana 3 j. *unguentum Egyptiac.* 3 j. *ss* dissolve them altogether, and make an Ointment; dip a Linnen-cloth in it and touch the Eye therewith, and put upon the Eye immediately

a Medicine which may allay the pain, and cool at the same time ; as the white of an Egg beaten with Plantain-water, or rather in place of it, wash it with Strawberry-water. When these Ulcers are thus cleansed, the Chirurgion must proceed considerately in closing them : For otherwise there is great danger lest the Eye-lids stick together, in that manner which is spoken of in the Disease named, *Prospaphis*, since both of them are ulcerate. To prevent this, you must use *Unguentum de tutia* spread upon a fine Linnen cloth, and laid between the Eye-lids, to with-hold one from another. In so doing, that which is ulcerated and kept clean, will heal a part, and the other in like manner. But if this Inconveniency should happen, you must have recourse to the Chapter treating of *Anchiloblepharon*, or the joyning together of the Eye-lids.

B O O K IX.

*Comprehending the Diseases incident
to the Sinew or Nerves of Sight,
called in Latin, Nervus opticus,
or Visualis.*

C H A P. I.

*Of the obstruction of the Sinew or Nerve of
Sight, in Greek, Amaurosis, in Latin,
Obfuscatio, Gutta serena : Also of the
deceived or dim Eye, called in Greek,
Parorasis, in Latin, Hallucinatio, or
Caligatio.*

A *Maurosis* most commonly is a hindrance of the whole sight, without any appearance thereof in the Eye : For the Apple of the Eye remaineth sound and unchanged, the Sinew of Sight being only stopped. *Savonarola* seemeth to name the beginning of this Disease in Greek, *Parorasis*, in Latin, *Hallucinatio* or *Caligatio*, which we may name in English, the dim or deceitful sight, when we take one thing for another, which is the Fore-runner and Messenger of a total blindness. These defaults befall to some
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suddenly, to others by little and little ; but so, that either they see nothing, or very little. The causes of that which cometh by degrees, are like to that Malady called in Greek, *Ambliopia*, in Latin, *Hebetudo*. And some have thought the difference of these twb to consist only in this, that the causes of *Ambliopia* are less, but the causes of *Amaurosis* is greater and stronger. Now the cause of that which cometh altogether suddenly, and (as we say) at one push, which is rightly called *Amaurosis*, is when the Sinew of Sight is filled and stuffed with gross slimy Humours falling into the hollownes of it, which will not suffer the Spirit of Sight, to be conveyed thereby into the Eye. The way to know the obstruction of the Sinew of Sght, and that no Spirit can pass through it, is this : Shut the other Eye, and the Apple of that Eye which is obstructed will not appear to be enlarged, which it would be, if the Spirit of Sight were conveyed thereunto by the optick Nerve : For this Spirit doth, as it were with a blast, make the Apple of the Eye broader. Therefore where this is not apparent, you must judge either the Sinew to be obstructed, or rather, that the Brain is not able to send Spirits to this Sinew, which may happen by weakness thereof, by long Sicknes, Trouble, or old Age, whereby the Spirits are wasted and scattered. The Fore-runners, and (as it were) outward causes of this Disease, are much rawness, or ill digestion, drinking of hot Wine, great heat of the Sun, or cold on the Head, continual Reading, Bathes after Meat, Vomiting, immoderate Company with Women, holding in of the Breath, as we see in Trumpeters : For all these things fill the Head

with

with Vapours. Before this effect does plainly appear, the Party perceives a great Heaviness in his Head, especially in the Root and bottom of the Eyes. In the cure of those to whom this Disease hath befallen through repletion, it is necessary to let them blood in the Arm first, then on the Forehead, to use cupping upon the Shoulders, with scarrifying, to purge, to observe a good order of Diet, to avoid strong Wines, to abstain from vaporous Meats, to rub the lower parts, is much commended. We keep this Salve (saith *Ætius*) in great admiration and honour. Take of Saffron ʒi. myrrh ʒi. Pepper gra. xv. Spikenard ob ij. Juice of Fennel ʒ xvj. ammoniac. thiniamat. ʒi. Honey ʒ v. When they are all beaten finely, pour into them the Juice of Fennel, then beat them again until they be dry, afterward put Honey unto them, and keep this Salve in a brazen Box for your use. Before you use this Collyrium, you must have at hand a Fomentation of Sea-water hot, wherein dip a Sponge and with it often bathe the Eye. This Author approves of the applying of a Caustick behind on the Head, as also to dry the Head. The use of Bags and Coifes put upon the Head, after the Hair is shaven, has produced good Effects. Take of the Flowers of *Stachados*, or both sorts of Lavendar, Hyssop, Betony Camomil, Ana. P. j. red Roses, P ij. Calam. aromat. lign. aloes ciperi an ʒ i. Bay-leaves, Majoran : ana. P. i. Nutmeg, the Root of the Flower-de-Juce, excellent Cinamon, an. ʒ ij. ʒs. Cloves ʒ i. ʒs. Storacis calamit. ʒ j. Ambergrease, gra. vj. Musk gra. iv. beat all these to Powder, and sew them in a linnen Cloth with Bombast, make it up in the fashion of a Coife. But before he
use

use it, he must rub and stroke down his Head with a little Bran, putting unto it a little Salt, which must be moistned with a little Wine. The following Electuary is cominended to comfort the Stomach, and to prevent the ingendering of gross Fleum in the Brain. Take of fine Cinnamon. ʒ j. and ʒ j. Cloves *ligni aloes*, Mace, ana. ʒ ss. Ginger ʒ ss. Annise-seeds in Powder ʒ j. take the equal weight of Sugar to them all, and with Wom-wood Water make Lozenges in weight ʒ iij. let him use these in the Morning three Hours before Dinner. Or rather let the Patient use this Electuary of singular Vertue: R. *Electuarii human. descript. Mesua* ʒ i. *ss Aromat. ros. ana.* ʒ ss. mix them together, and let him take thereof Evening and Morning, before Meat, the quantity of a Chesnut. I have not set down here any Eye-salves, they being of no use in this case, since the fault is not in the Eye.

CHAP. II.

Of the depression or weakness in the Sinew of Sight or Optick Nerves, called in Greek, Symptosis, in Latin Concidentia.

S*ymptosis* is, when the Sinew of Sight, or Optick Nerve is so flat, weak, and pressed together, that there is not any hollownes remaining in it, because the inside of the Skins do touch each other. This Disease proceeds from the abundance of Humours which fall not into the hollownes, but upon the substance of this Sinew, which thereby is so much loosed and softned, that
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it falleth together, and one part lieth flagging upon another. It may also come from dryness, whereby it is withered and shrunk together, and becometh wrinkled, as may be evidently seen in old Men, when the holes and porous Passages thereof are stopped. This defect proceeds also from weakness, though the Sinew be neither too moist, nor too dry. This we may observe in old People, which have the Conduit of their Urine so depressed through weakness and feebleness of the part, that no water can pass that way. So we may judge of this Sinew of Sight, which being feeble and decayed, cannot give entrance and free passage to the conveying of the Spirit of Sight into the Eye, whereupon the party must of necessity be deprived of sight. Now, tho' there be small hopes of cure, yet let not the Chyrurgion leave the Patient destitute of all help. For if he perceive the Disease to arise from a superfluity of Humours or Repletion, the general and particular Remedies set down in *Ambliopia*, will be convenient and agreeable in this case. But if old Age bring along with it this Infirmary, then it is to be looked upon as incurable.

C H A P. III.

Of the breaking asunder or Rupture of the Sinew of Sight, called in Greek, Aporrexis, in Latin, Abruptio, also of Paremptosis, or Coincidentia.

A *Porrexis* is, when the Sinew of Sight is broken asunder, by a stroak or fall, in such a manner that presently after there ensues a most desperate blindness, because the Spirit of Sight cannot be carried unto the Eye. *Paremptosis* is, when the Sinew of Sight is stopped by means of some Humour which floweth into the same, because the Sinew gapeth, and seemeth as it were cloven or chinked. The way to discern and distinguish one of them from the other, is this: If it be utterly broken, as in *Aporrexis*, and separated from the Brain, by a stroak or fall on the Head, first the Eye is thrust forth, afterward it sinketh deep into the Head, then it receiveth no nourishment as it ought to do, the Sight is wholly lost without recovery: And if one of the second part of Sinews be broken, the Eye hath neither sence nor motion, but remains fixed in the Circle. But when this Sinew of Sight doth only gape, and be cloven, and as it were rent, the Eye remains in the place, and the sick party seeth (as we say) by fits, especially in a short time after: When some part of the Humour which was entred into the Eye, is dissolved and dispersed, the Sinew is strengthened, and in some measure joyned again. Concerning the cure, the Chirurgion must have more care to maintain

maintain and preserve the Beauty of the Eye than to endeavour the restoring of the Sight, which is lost past reprieve; for it being to be feared, lest some violent defluxion of Humours, Pain or Inflammation, fall upon the Eyes, whereby they may be so strained as to fall out of the Head, or to burst asunder, as we have mentioned before. Therefore to avoid a relapse, you must have recourse both to general and particular Medicines, such as are able to obviate and heal the aforesaid inconveniences whensoever they happen.

THE following Letter concerning an extraordinary Case relating to the Diseases of the Eyes, was transmitted to London by Monsieur Le Jeune, Chyrurgion to the French King.

The

T H E
English Copy
O F T H E
L E T T E R.

I Thought it expedient to advertize you of an extraordinary case that happened in this place, not many Days past; One of the Family of the Duke of Guise came unto me, troubled with a Disease in the Eye. It seems there are upon the membrane conjunctiva, or white of the Eye, little Beasts like unto little Lice, or great Worms in the Hands, which cause so vehement an itching, that when the party is troubled with them he becomes impatient, and can't forbear rubbing his Eye without teasing. I laboured hard to Cure it by those means prescribed by the ancient Authors in Ptheriasis, but prevailed either nothing at all, or at least little. The aforesaid Patient therefore addressed himself to a certain Woman, dwelling about Joynville, who in my presence, with a Sliver Needle took away very dexterously, and with very little Pain, the Worms or the Nits from the

M Membrane:

Membrane : And unless I had seen them move, I should scarce have been perswaded that such Vermin could be ingendred on the White of the Eye. The Woman avouched to me, that she had taken the like from many others at divers times, without any hurt ensuing, and that many in this part of the Country were subject to the like Disease; which thing by diligent inquisition I have found to be true.

Farewel.

PRACTI-

Practical Observations *relating to some extraordinary Cures, of the Diseases of the Eyes, &c.*

An extraordinary Cure of the *Gutta serena*, joyn'd with a *Glaucoma*.

IN December 1705. was brought to me Jeremiah Puttifold, of the *Parish of Watford in Hertfordshire*, being then in the Fifty fourth Year of his Age: He had had the Misfortune about Eighteen Months before, to receive a most violent Contusion on his Head and on the right Eye, which thereby was totally deprived of his Sight.

He did not neglect to take timely the Advice, not only of all the most Experienc'd Masters in this Art, but also of all the most able Physicians and skilful Surgeons in and about *London*; but all these unanimously

M 3

agreeing

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agreeing in this point, That there being a total Obstruction of the Optick Nerves, and consequently scarce any hopes of recovery, the Patient began to despair and lay aside all thoughts of a Cure ; At last some of his good Friends, pressing him most earnestly to have recourse to me, he accordingly committed himself to my Care.

I must confess, that having maturely weigh'd the Case, I found it intangled in no small Difficulties, by reason of the Complication of the Symptoms usually attending the Diseases depending on the Optick Nerves, according to their different Nature, and the Causes that produce them. For, it is to be observed that the violent Contusion which was the first Cause of this Disease, might by the extraordinary agitation of the Spirits and Humours, either produce an *Amaurosis* or Obstruction of the Optick Nerves in their hollownesses or *tubuli*, by the Defluxion of the gross Humours into those parts, which must needs impede the Natural course of the Spirits of Sight to the Eye ; or also cause a *Symptosis* or *Depressing* of the same Nerves ; when the same Humours being discharged, and fixt into the very substance of the Optick Nerves, they become weak
and

the Diseases of the Eyes:

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and flaccid, and for want of due extension of the parts that compose them, are not in a condition to give entrance, and a free passage for the Spirit of Sight to the Eye. Besides, that in case by the violence of the Contusion, there should have been occasioned an *Aporrexis* or breaking a sinder of that Nerve, there would have been but slender, or rather no hopes of a Cure. But since by what I could judge by the outward appearance of the affected Eye, I had some reason to believe that this Disease ow'd its rise chiefly rather to one of the before mentioned defects of the Optick Nerves; I took my measures, and ordered my Cure accordingly. As the chief indication of the present case was to remove the obstruction (whether in the concavities or substance) of the Optick Nerves, so I had recourse to such Cephalicks, as by their strengthening and subtilising quality, were most proper to attenuate, dissolve, and disperse those gross and vicid Humours, which had hitherto obstructed the natural Course of the Animal Spirits (commonly stiled Spirits of Sight in those parts) through the Optick Nerves, and consequently their conveyance to the substance of the Eye. The better to second the efficacy of the Cepha-

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licks, I order'd also such Stomachicks (generally known by the Name of Cordials) as by correcting the Crudities and ill digestion of the Stomach, and consequently fermenting the Blood by a laudable Chyle, in order to subtilise and augment the force and vigour of the Animal Spirits, consequently did render them the more efficacious, in removing those Obstructions which were the immediate Causes of this Disease.

The effects answered my expectation thus far, as to find my patient to have some glimpses of Sight; but, as at the same time I observed a certain Dullness in his Eyes, I judged at first, that this *Gutta serena*, or Obstruction of the Nerves, was attended here (as it sometimes is) by a *Cataract*: But, as I was not ignorant what great resemblance there is betwixt a *Cataract* and the *Glaucoma* at first Sight, tho' very different in their Causes and Cure; the first owing its origin to a Defluxion of Humours, belonging to the Eye, and congealed there, whereas the last proceeds from the viciated CrySTALLINE Humour, I at last, upon repeated and strict Examination, found it to be a *Glaucoma*, (a Distemper by the Consent of all that are well versed in this Art, not easily to be cured, by
reason

reason of its deep situation.) But not to leave any thing unattempted that I judged might conduce towards the completing of the Cure of the afflicted Party before me, I had recourse to such Remedies, as by their moist'ning and dispelling quality, have a Vertue of mollifying, preparing, and dispersing any coagulated Humours; of this kind are the Tops of *Mallows*, of *Violets*, the Herbs of *Eyebright* and *Celandine*, *Camomill-flowers*, *Lin* and *Fennel-seeds*, boil'd in Water for a fomentation. The distill'd Waters of *Fennel*, *Eyebright*, of *Benzoin* and *Storax Calamit* apply'd to the Eye, answer the same end; and in short all such Medicines as have a Vertue of dissolving imperfect *Cataracts* or *Webbs*, provided they be used with Discretion.

All these Remedies, with suitable Cephalick Purges, being intended only as Preparatives, to facilitate the Manual Operation; I proceeded to the same with a Couch Needle, adapted properly to the removing of such like coagulated vicious Humours (which by the Consent of all Artists in this kind, prove more difficult in the Operation than ordinary *Cataracts*) in which I succeeded so well, that in a short time the Patient recovered his full Sight.

Several

*Several Experimental Observations upon the
Fistula Lachrymalis.*

I Have had frequent Experiments of the Cures of the *Fistula Lachrymalis*. This Disease displaying its effects in the Corner of the Eye, next adjoining to the Nose; and this being of a glandulous Substance, and framed by Nature to retain, and in due proportion to convey a certain liquid Excrement from the Brain to the Eye, (to keep it moist) is often subject to what we call an *Anchilops* or an *Apostume*, which if not managed with the utmost care, generally degenerates into a *Fistula Lachrymalis*, or the *Weeping Fistula*.

As this Distemper owes its first Cause to a sharp and corrosive Humour, which reaches even to the Bone; the common Method used among our Practitioners is, to apply an actual Caustery, not only to the infected Bone, but also to the parts that are cross within the concavity of the *Fistula*. But how frequently they find themselves disappointed in the effect thereof, is sufficiently known by dayly experience. Neither can those promise to themselves and their Patients much better

the Diseases of the Eyes. 9

better Success; who in order to correct the sharpness of the peccant Humour in that part, have too often recourse to unctious, sulphureous, or oleagenous Remedies. For these serving only to ferment the acid, sharp and corrosive Humour, which occasions the *Fistula*, add fuel to the fire, by putting in motion, and exalting the malignant Humours, and consequently, produce more pernicious Symptoms, as the *Encanthis* or Excreescency of Flesh in that part, and sometimes also a *Rheas* or *Weeping Eye*, occasioned by a total Consumption of the glandulous substance in that Corner of the Eye, which proves most commonly incurable.

To avoid these inconveniencies, and to answer the true indications relating to this Disease; I always endeavour to divert the Flux of the corroding Humour to the affected part, not only by the most proper Cephalick Purges, but also by Vesicatories or Blisters; and to put a check to the Inflammation, I administer *Phlebotomy*, less or more, as occasion and the Constitution of the Patient requires.

My Patient being thus prepared for the Operation; I proceed to the opening or dilatation of the exteriour Orifice of
the

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the *Fistula* (which in this, as well as in all others, is much narrower than the concavity within) by the help of a pointed Instrument. This Operation being perform'd with a dexterous Hand, I make use of no other Remedies but my *Styptick Water*, which being apply'd lukewarm with Compresses, as is usual in such like Cases, without any further trouble, accomplishes the Cure: Unless I find it proper to apply a Digestive afterwards, and a cooling Mixture, such as *Rose* or *Plantain-water* mix'd with the White of an Egg, &c. This Method I took with Mrs. *Townsend*, Sir *Robert Townsend's* Daughter; and with two Daughters of Justice *Addison*, now living in *Westminster*, all which were perfectly cured within these few Months.



An

An Extraordinary Case, relating to a Cancerous Excreescency in the Great Corner of the Eye.

Since we are upon the Diseases of the Great Corner of the Eyes next to the Nose, I can't forego to mention an uncommon Case of an *Excreescency* of a Cancerous Nature, which fell under my Hands in *October, 1705.*

One *John Macklelon*, belonging to Her Majesty's Horse-granadiers, commanded by the Honourable Lieutenant General *Cholmondley*, having about Thirteen years ago received a dangerous Wound, near the Great Corner of the Right-eye, by a Musquet-ball, at the Siege of *Limerick* in *Ireland*, and the same being attended with a most violent Inflammation (as is usual in Wounds of this Nature) at last, notwithstanding all the care of the Surgeons (as I understand) turn'd into an *Anchilops*, or *Abcess*, or *Ulcer*, and in spite of all the Remedies apply'd to heal it up, in process of time produced a dangerous Excreescency of flesh, in the before mentioned part. The Patient then applying himself to divers outlandish Surgeons; they left nothing

thing unattempted to remove this piece of flesh, by the application of Burnt-Alum, Calcin'd Vitriol, and such like other drying and consuming Medicines, but without any effect. This superfluous piece of flesh growing by degrees, hard, rugged, of a Blueish Colour, and a malignant Nature, with violent and pricking Pains; there being therefore not the least hopes left of a Cure, but what might be expected from the Hand of an able Operator; and the said Patient being recommended to my care, I undertook the task, tho' subject to no small Difficulties, by reason of its nearness to the Nose, and the danger there is of cutting away part of the natural Flesh adjoining to it, in the Corner of the Eye, which would infallibly produce a *Rheas*, or the continual weeping of the Eye. Notwithstanding all these Difficulties, and the malicious Nature of this *Cancerous Excreescency*, which was rooted very deep, I took it away by a Manual Operation, stopt the Effusion of Blood by the help of my Styptick-water, prevented the growing again of the superfluous flesh, by the application of some drying Medicines; and in eight days time restored the Patient to his perfect Sight, and free from all Pain.

Another

*Another uncommon Case of a Cancer in the
Corner of the Eye.*

IT was much about the same time, that another much more difficult Case than the former did fall into my Hands: This happened in the person of one *Elizabeth Bailey*, of the Parish of *Hayes*, not far from *Uxbridge*, in the Country of *Middlesex*; who being afflicted with an Ulcer in the great Corner of the Eye, in the glandulous Part, adjoyning to the Nose; the Edges whereof appear'd swell'd, of a much darker Colour than the ordinary Inflammations, attended with less heat, enclining to a Blue, and interspersed and surrounded with Veins much swol'n, proceeding from a melancholy, sharp and gross Humour, which being apt to discharge it self chiefly upon the glandulous Parts of our Body, by reason of their spongy natural disposition, produces the Disease generally known among the Surgeons by the Name of a *Cancer*, from its outward form; the swol'n Veins which always appear in this malignant affect, being extended not unlike the Claws of a Crab-fish.

Upon

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Upon a nice Inspection, I was soon convinced, that this being a bleeding ulcerated *Cancer*, there was but little to be expected from the internal or external Remedies alone. For, tho' in the beginning of a Cancerous Tumour, not ulcerated, there may perhaps appear some glimpses of hopes, for either Curing, or at least stopping the Progress of this malignant Disease, by such proper Medicines as may remove its antecedent Cause, such as the stoppage of the Monthly Times in Women (which degenerating into a sharp corroding Humour, frequently prove the occasion of this pernicious Disease) the superfluity of melancholy, terrestrial and gross parts in the Blood, proceeding from the vitiated function of the Spleen, a melancholy disposition, and gross Diet and Air; by proper Alenipharmicks, such as *Venice Theriack*, or *Mithridate*, which attenuate, disperse or force outward the malignant Matter, and by such other gentle external applications as without violence, or stirring, or irritating the peccant Humour, fix'd in the exterior part of the Body, may dissipate, or at least asswage the sharpness and malignancy of the peccant Humour; tho', as I say, such like Remedies with appropriated Purges, such as *Aloes*, *Rhubarb*, *Cassia*,
or

or *Hierapicra*, a convenient cooling and opening Diet; and Phlebotomy fitly made use of, may produce some good effect in the first beginning of a Cancerous, not Ulcerated Tumour; yet this being an old, rebellious, malignant and ulcerated *Cancer*, which by reason of its venemous and corrosive quality, is rather irritated than asswaged by external applications, and is too deeply rooted to give way to internal Medicines without other help; I was soon convinced, that if any Cure was to be hoped for in so dangerous and pernicious a Case, it must be from a Dexterous Manual Operation.

I was sufficiently sensible that this cutting out of the *Cancer* (which was of such a bigness as to cover almost the whole Eye, and to intercept the Sight) was subject to no small hazard, considering that in a place of so little an extent betwixt the Eye and the Nose, (as the Great Corner of the Eye is) I was under an equal danger of either impairing some of the adjoining parts, or else to leave part of the Roots of the *Cancer* behind, (being the Veins interspersed or surrounding the Ulcer, and fill'd with Melancholick Blood) which if it happen, it is so far from Curing the Disease, that it

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rather

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rather Augments and encreases it, beyond all hopes of a Cure. Add to this the danger that must needs attend the Searing of so nice and tender a part (after the Cutting out of the *Cancer*) in order to stop the effusion of the Blood; which consideration alone, I must confess, would have proved a sufficient motive to me, to desist from so dangerous an Enterprize, had I not been fully satisfy'd of the excellent Operation of my Styptick Water, by reiterated Experience, which answering all the indications of Searing, in relation to the stopping of the flux of Blood, and being besides this of a Balsamick Nature, and a great restorative of the fleshy corroded part, I judged, I might with much less hazard, and not without some prospect of good Success, venture upon the Incision or Manual Operation.

By God's Blessing the effect answered my expectation: For, after some proper Purges to remove the peccant Humours, and consequently to stop the flux to the affected part, I perform'd the Incision, and after having Cut out the *Cancer*, Root and Branches, perfected the Cure by the only application of my Styptick Water, and preserved the Sight of my Patient.

An

*An Extraordinary Case, of the stopping of
a violent Effusion of Blood.*

TO give you another Instance of the marvellous effects of a good Styptick, you must know that within a little time after was recommended to my Care, one Mrs. *Noles* of *Hedscoc*, in the County of *Suffolk*. She had a Wen of at least Ten Pounds Weight upon her Right-Arm, which being a great hindrance to the use of the said Arm, she desired me to take it off; I leave it to the Judgment of all such as are truly vers'd in the Art of Surgery, Whether the cutting off of an Excrescency of such a bulk must not infallibly be subject to great hazards, were it only for the great effusion of Blood, which in all probability must be the consequence of such an Operation? However, relying upon the excellent qualities of my Styptick Water, I undertook and perform'd the Task, stopt the Blood, and cured the Wound by the external application of the before mentioned Water.

Another very difficult Case, of a Cancerous Excrefcency in the Great Corner of the Eye.

NEAR the fame time, *viz.* in November, 1705. Was recommended to my Care Mr. Scedmore, my Lord Mainard's Buttlcr, who being afflicted with a moft dangerous Excrefcency of a Cancerous Nature in the Great Corner of the Eye adjoining to the Noſe, of an extraordinary bignefs, I, after the uſe of proper Purges, Cordials and Phlebotomy, took away by Inciſion, and eradicated the whole Cancerous Excrefcency, and by the only application of my Styptick Water, anfwer'd all the further indications of ſtopping the effuſion of Blood, and healing up the Ulcer, by engendring of new and ſound fleſh, without the leaſt hindrance of the Sight of the Patient.

I have told you in ſome of the before-mentioned Caſes of this Nature, that as the expelling of the corroſive malignant Humours contained in the Maſs of the Blood, which occaſion theſe pernicious Cancerous Ulcers, is endeavour'd moſt commonly by the Practitioners, through

through the means of Alexipharmicks ; so the stopping of the effusion of Blood, which is the ordinary consequence of such like Incisions, whereby the *Cancer* is totally cradicated, is generally performed by them by Searing. But, considering that the first of these two Remedies does not always answer the expectation of the Practitioner as well as of the Patient ; and the second proves very often dangerous, or rather impracticable ; by reason of the tenderness and situation of certain parts adjoining to the Cancerous Ulcer (as in the Cases of the *Cancers* in the Corner of the Eye) or by the spreading of the same malignant Ulcer, into a considerable compass, so as to extend to the great Veins ; I have, to obviate these Difficulties, prepared a peculiar Antidote appropriated to this Disease, and to be taken inwardly, and at the same time a Styptick Water, to answer all the ends that can be proposed by Searing, but with much more ease and less hazard ; the same by its Astringent and Balsamick Quality, not stopping the effusion of Blood only, but also healing up the Ulcer, without any dangerous Symptoms.

Of these I will give you some remarkable Instances, tho' not relating to the Eyes.

NOT many Months ago, being at Windsor, I was call'd to one Mrs. Cary, who being afflicted with a most pernicious Cancer in one of her Breasts, had taken the Advice and Remedies of the most able Surgeons in those and other parts, but in vain ; the Cancer being so far from hearkning to those internal and external Remedies, that it grew more malignant every Day, and spread it self to such a degree, as to be almost past all hopes of a Cure. I must confess that the bigness of this Cancer would have deterr'd me from venturing upon the Incision (for it weigh'd no less than Ten Pounds) had I been forced to trust to Cauterizing or Searing ; but being convinced by manifold experience, of the singular Vertues of my Styptick Water, I Cut out the whole Cancer, and perfected the Cure without any further Difficulty, by the application only, of my Styptick Water.

I met

I met near the same time with another Case of the same Nature, in the Person of Madam *Harmon*, living at *Salisbury*: This Lady had been miserably tormented for some time with an ulcerated Cancer in her Breast, which tho' it was somewhat less than the former, yet exceeded it in its malignity and pernicious Symptoms, being much swol'n, hard and knotty, with hollow edges, full of black, blue and bloody Matter, whence floweth continually a thin waterish, dark, yellowish Humour, the whole being attended with almost intolerable Pains. Those that were call'd to her assistance, left nothing unattempted that might conduce towards the removing, or at least, stopping the Progress of this Evil, by Alexipharmicks and Evacuations, which are absolutely necessary to cleanse the Blood from these gross terrestrial, melancholly Humours, which administer Nourishment to this Evil; as also by such external applications (as far as I could learn) as are most commonly made use of in such like Cases; as *Lytharge*, the *Tolks of Eggs*, the *Ashes of Cypress*, *Red-lead* or *Lead-ashes*; the *Juice of Roses*, *Virgin-honey*, *Frankincense*, and such like,

mix'd and made up into divers Compositions (according to the various Symptoms of the Ulcer) with the Marrow of a Stag, or a Calf, or White-wax into the Consistency of an Ointment. But, notwithstanding all these endeavours, this Cancer became painful and corroding, and the Matter issuing thence more putrid and ill-scented, so that every Body looking upon it as incurable, the poor Gentlewoman was given over and left by all. However, being advised to have recourse to me, she accordingly wholly committed herself to my Care and Management ; I was not insensible of the hazard I was likely to run in this undertaking, in regard, not only of the deep situation of the Cancer, but also in respect of the Patient herself, who was brought so low, that had this malignant Ulcer been handled by actual or potential Cauteries (according to the common Method) she could never have undergone the Torments and Painful Symptoms that attend these Operations, which must needs have reduced her into a desperate languishing Condition. For it is to be observed, that the ordinary way of Cauterizing, especially by actual Cauteries, after the Incision, being intended for two ends,
first

first to stay the Effusion of Blood issuing out of the large Arteries and Veins, so near to the Heart, and secondly to extirpate the Remnants of the malignancy of the Cancer, in Case there be any such, after the Incision, is subject not only to no small hazards, by reason of the noble adjoining parts, but also puts the Patient to excessive Pain, produces continual Watching, and oftentimes Mortal Agues, whilst the Ulcer is brought to a Suppuration, in order to its Consolidation.

These Considerations must needs have been prevailing enough with me, not to venture upon so hazardous an Undertaking, had it not been for the Confidence I reposed in my before mentioned Styptick Water, and in my own Operation, which succeeded so well, that I took out the whole Cancer with all its Roots, and having order'd my Patient a convenient Diet, *viz.* To abstain from Wine and hard Meats, to Drink cooling Liquors, but at the same time to feed upon strengthening Meats, and of an easy Digestion: I perfected the Cure without any further ill Symptoms, by the only use of my Styptick Water.

I cured

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I cured Mrs. Rowe a Midwife at *Stratham*, in *Surry*, in the way to *Croydon*, affected also with a most pernicious Cancer in the Breast, after the same manner, viz. after general Evacuations to cleanse the Blood of the Black Choler, I took out the *Cancer* Root and Branch, and by means of a proper Diet, and the application of my Styptick Water, restored her to perfect Health.

Having told you before, that my Styptick Water answers in a most excellent Degree the stopping of the effusion of Blood, after the Incision of a Cancer, I can't forbear to give you a late remarkable instance of that kind, tho' not relating immediately to the Cure of a cancerous Ulcer.

One Mrs. Crook living at *Windsor*, had been afflicted with a malignant Exulceration in one of her Legs, which turning at last Gangrenous, and the Leg being quite mortify'd, the only way left to preserve her Life, was to Cut off the Leg, before the Gangrene could communicate and spread it self to the nobler Parts; this I perform'd in the presence of his Grace the Duke of *Northumberland*, and cured it without any considerable
loss

loss of Blood, by the application of my so often mentioned Styptick Water, and convenient Bandages and Compresses.

As to its Balsamick and Healing Quality (the second indication appertaining to the perfecting of the Cure of Cancers after Incision.) I met in 1697. with a very extraordinary instance in the Person of one Mr. *Lawrence*, then a Student of *Jesus Colledge*, in the University of *Cambridge*, now a Minister near the City of *Norwich* in *Norfolk*: This Gentleman had the Misfortune to receive a dangerous Shot by his own Fowling-piece, as he was turning the Muzzle towards his Body near the *Sternum*, which passing slanting round his Ribbs, reach'd, and pierced the very Shoulder-bone; Notwithstanding which, he was chiefly cured by the application of my Styptick Water.

A few years after, *viz.* in 1701. I had another Experiment of its Balsamick, as well as Styptick Quality, in Mrs. *Mohun* living at *Lysgard*, in *Cornwell*. This Woman had an almost stupendous Wen, reaching from between her Shoulders, to the very small of her Back;

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Back; As this Wen, after its being Cut away, weigh'd no less than Twenty Five Pounds, so I leave it to the Judgment of all able Operators, whether the Cure thereof must not be subject to several Difficulties, scarce to be removed by common applications; the Defects thereof being supply'd by the before mentioned Styptick Water, she was restored to perfect Health, without the least appearance of any dangerous Symptoms.

I might insert many more Instances in relation to Ulcers, Fistulas and Cancers, and their Cures perform'd at sundry times in the Universities of *Oxford* and *Cambridge*, at *Edinburgh*, *Glasgow*, *Aberdeen*, *St. Andrews*, *Dublin*, &c. but my present purpose being limited within the compass of a few extraordinary Cases, I will stop here, and proceed to some other Difficult Cases.

After

After this Digression, relating to various Cancers, we will now return to the Diseases of the Eyes.

A Certain Lady (whose Name I am obliged to conceal) being for several years afflicted with a most violent defluxion of a sharp and phlegmatick Humour upon one of her Upper-eye-lids, to such a degree, that she was not able to lift it up without the help of her Finger, took the advice of several able Artists in the Diseases of the Eyes. These, as far as I could understand, left nothing unattempted to remove the Cause by all possible Revulsions, and to correct or disperse the peccant Humour by proper outward Medicines apply'd to the affected part ; such as Fomentations , made of *Red-roses, Camomill, Hyssop, Wormwood, Origandum, &c.* boil'd in half Water and half Wine, to be apply'd, with a Sponge dipt lukewarm in the Decoction ; as also the Ointment of *Vigo*, without *Mercury* ; of *Melilot*, of *Laurel-berries, &c.* But all these Remedies not producing the desired effect, she recommended herself to my Care. I follow'd the Foot-steps of the other Practitioners,
by

by Revulsions, and other proper external Applications, but finding all this not in the least to answer my expectation, I was forced to think of another Method, to stay the defluxion of the Humors to the affected part. All other possible means (as I told you) having proved ineffectual, I had recourse to Manual Operation, which was to divide the Temporal Artery, so, as thereby to Cut off all the Communication with the Eyelid. The Success was answerable to my hopes, for by the use of a certain Eye-water of my own Preparation, and of a proper Purge once in Three or Four Days, the Patient was perfectly cured soon after of this troublesome and tedious Indisposition. It would be superfluous to put the able Practitioner in mind of the Difficulties that frequently arise after the Incision of Arteries, to stop the effusion of Blood, by reason of their Pulsations ; it will suffice to mention in this place, that being secure of the frequent happy effects of my Styptick Water, I ventured upon the Incision with the less reluctancy, and perfected the Cure without any sinister accident.

Several

Several Instances of the Cures of most violent Defluxions upon the Eyes.

I Had towards the latter end of the last Year 1705. several other Patients troubled with such violent Defluxions upon the Eyes, as quite to impare the Sight.

Among these the Daughter of Mr. Ford, living in *Grays-Inn-lane*, having been afflicted for some time, with a Distillation of very sharp Humours upon the Eye; the same produced at last, a total Abolition of the Sight. This Disease ow'd its Origin to a waterish, but at the same time, sharp and gross Humour, engendred in the Head, or some Vapours arising from the ill digestion of the Stomach and Bowels, and transmitted thence to the Head, from whence afterwards they fall down upon the Eye, and especially upon the *Conjunctiva* or White of the Eye; For, this Membrane being not framed of such solid Particles as the Membrane *Cornea*, and consequently more spongy, is apt to imbibe and retain the before mentioned Humours, which produce Swellings, Inflammations, Dimness, and
if

if at last fixt there, the total Loss of Sight.

To remove the antecedent Cause of this Disease, I judge it most proper to have recourse to such Remedies, as by diverting the peccant Humour another way prevent its Defluxion to the Eye; such as hard Frictions upon the Neck, Arms and Shoulders, and Cupping-glasses apply'd to the same place; Proper Cephalick Purges to carry the gross Humours from the Head; but above all, to refrain from all Meats and Liquors that send forth Vapours to the Head, and to use Cinamom and other such like Stomachick Remedies as correct the Crudities gathered in the Entrails, by the use of Meats of an ill digestion.

After these Preparations, it is requisite you should have recourse to such external applications, as by their resolute and strengthening Quality, are proper to disperse the Humours gathered in the Eye, and to support the vigour of the Animal Spirits, or Spirits of Sight in the affected part.

Of this kind are the *Flowers of Camomill* and *Melilot*, *Red-roses*, the *Herbs of Sage* and *Betony*, the *Seeds of Anise*, *Fennel* and *Fenegreek*, boil'd very well in half red Wine, and half Water. This Fomen-

Fomentation must be frequently apply'd luke-warm with a Sponge dipp'd into it, to the affected part. The better to help the Operation of this Fomentation, it is very proper sometimes, to add an Ointment made of the *Mucilages* of *Linseed* and *Fennel-seed* drawn in *Rose* and *Eye-bright-water*, and made up with well prepared *Tutia* in the form of an Ointment. But after all, I repose my chief Confidence in a certain *Aqua Ophthalmica*, or Eye-water of my own preparation, which having a peculiar quality of dispersing the peccant Humours settled in the Eye, of reviving and strength'ning the Spirits of Sight, is besides this, by its Composition, adapted to most indispositions of the Eyes, proceeding from the Defluxions of Humours upon their Substance; though of a different Nature.

I have experienced its happy effects in several Diseases of this kind, tho' attended with different Symptoms, and in different Constitutions: As in the Daughter of one Mr. *Taylor*, living at the Sign of the *Blue-anchor*, at *Bow*; in the Daughter of Mrs. *Dewberry*, in *Monmouth-street*, *London*; and in one Mrs. *Wales's* Daughter, living near *Fleet-street*; as likewise in
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the Son of one Mr. *Samuel Warner*, living in *Queen-street*, by the *Seven Dyals*, near the Sign of the *Castle*.

All these were afflicted with De-
fluxions either of sharp or gross Hu-
mours (much about the same time)
upon the Eyes to such a Degree, as
totally to deprive them of Sight. I
must own, that the restoring of those
Persons to their perfect Health, was
owing (next to the general internal
Remedies, and proper Revulsions, as
before mentioned) to the singular
Vertues of my before said Eye-wa-
ter; in defect whereof, recourse may
be had to the several Remedies men-
tioned in the preceeding Case. But,
if by the heat and sharpness of the Hu-
mour fall'n upon the Eyes, by the
Sanguine and Cholerick Disposition of
the Patient, and by the heat of the
Season, after immoderate exercise or use
of hot Liquors, or violent Contusion,
there appears a violent Inflammation in
the Eyes (as it happened in some of the
before named Patients) the usual Re-
vulsions by Frications, and Bleeding,
will scarce prove sufficient; but after a
plentiful Phlebotomy, recourse must be
had also to Cupping, with Scarifications
and

the Diseases of the Eyes. 33

and large Vesicatories or Blisters, to drive the Humour from the affected part.

To stop the violence of the Defluxion thither, the best way is to use, by way of outward application, such Remedies as have a Cooling and Anodine quality, mix'd with something of an Astringency; such as the *Mucilage of Quince-seed* made with *Rose, Plantain* or *Poppy-water*, the *Roots of the White-Lillies* boil'd with Milk, in form of a Cataplasm; or *Lentils* boil'd in Water with some Hony, for a Fomentation; Clysters are also very proper, a spare and cooling Diet, and abstinence from all violent Exercise is absolutely necessary; For, unless the Inflammation be stay'd in time, it may produce an incurable Ulcer, or Gangren, which totally corrupts the Eye past all reprieve.

Practical Observations concerning
CATARACTS.

BEfore we come to a Conclusion, it will not be improper to add some Observations relating to some extraordinary *Cataracts*; For, tho' it would be in vain to attempt to instruct the Reader in the total Cure of *Cataracts*, because the Consummating thereof consisting chiefly in a dexterous Manual Operation, perform'd with a Couching-needle, which removes that hard and skinny Substance, which impedes the Sight, is not to be Taught but by Practice; nevertheless, there being various Causes, Symptoms and Circumstances, preceeding, attending and following this Disease, they may not improperly fall under our consideration; wherefore I have given you some few extraordinary Instances of *Cataracts*, most of which, if not all, have pass'd through my Hands within these Two or Three Months, and are chiefly remarkable for the great Age of the respective Patients.

The first in order that may justly challenge a place here, was Dr. *Chamberlain*,
Rector

Rector of *Badworth* in *Stafford-shire*, who having been for a long time troubled with a Defect in his Sight, which at last turning to a *Cataract*, he recommended himself to my Care. After having taken a full view of the *Cataract*, whether it were come to its full maturity (without which it is not fit to be Couch'd, but must be let alone till it be ripe) and whether its Colour and other Circumstances gave to me certain hopes of a Cure, I went about the Operation with such Success, that tho' my Patient was Seventy years of Age, he recovered his Sight, without any further Remedies, then prescribing him a cooling Diet a few Days before the Operation, to be continued for a Week after, and to keep him very still; for fear by stirring the Humours it should be drawn to the affected part, and the *Cataract* ascend again; for which reason it is also convenient that the Patients Eye should be kept from the Light. The best way to dress the Couch'd Eye, is to apply to it the White of an Egg, with a Linnen-cloath, and upon that such Remedies as prevent Inflammations; in which point, my *Aqua Ophthalmica* excels all the rest that ever I met with yet in my Practice.

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In the same manner I proceeded with Mrs. *Pierce* at *Chelsea*, unto whom I restored her Sight, by Couching a *Cataract* in the Seventy second year of her Age ; and Mr. *Oliver Cromwell*, in *Brew-house-yard* in the *Strand*, *London*, when he was no less than Ninety three years old.

Mr. *Blows*, living next Door to the Sign of the *Coach and Horses* in *Carnaby-street*, *Westminster*, near *Golden-square* ; *Edward Washbear*, belonging to *Chelsea-Hospital*, and Mrs. *Hall*, of the Parish of *Clerkenwell*, were all three Couched and recovered their Sight, being each of them Eighty years of Age. Many more late Instances might be inserted here of the same kind, but all these before mentioned Cases relating to Persons of a very advanced Age, whose Sight is naturally much impaired by the weakness of their Vessels, and small quantity of the Spirits of Sight, these may deservedly challenge a place here, instead of all the rest ; However, I can't forbear to mention three other *Cataracts* which happening in Persons that were born Blind, and the difficulty of restoring Sight to Patients under that Circumstance, being sufficiently known to all that are versed in the Art of Physick or Surgery, they ought in my Opinion not to be omitted here,

here, since they may serve as a warning both to the Operator and Patient, not to despond of a Cure.

These three Persons were *Catherine Newson* and *Alice Newson*, living near *Halfworth*, in the County of *Suffolk*, and one *Thomas Ward* in *White-cross-street*, *London*, who tho' born Blind, were Couch'd successfully of late, and see very well.

To conclude the whole, I Judge it requisite to add some Observations concerning the preservation of the Eyes or Sight, as well before as after the Cure, since the first may prevent in some measure the Disease, and the second stop its return; nothing being more common in this, as well as in many other Distempers, than to see a relapse in Bodies naturally disposed to receive the same morbidick Humours again, whereof they have been delivered before by the help of internal or external Remedies.

Several useful Rules concerning the Preservation of Sight.

BY way of Prevention, since the *Cataract*, or that hard congealed skin which covers either part or the whole Eye-apple, most commonly owes its Origin to excessive heats or colds, or certain gross and viscid Humours, ascending from the inferiour parts to the Head, and thence being transmitted to the Eyes; I say since it proceeds most commonly, &c. (for sometimes it cometh from a violent Contusion, or pain in the Head, especially after a violent acute Distemper, which is not in our power to remedy) great Care must be taken by all those who find the least Symptoms of Defluxions upon their Eyes, to avoid those inconveniences, especially by a reasonable middling Diet, and using of moderate Exercise. But, if notwithstanding all these precautions, they find certain dark Atoms, not unlike Flies or Gnats swimming before their Eyes, or like Hairs, Threads or Spiders-webbs, and that one of the Eyes upon a narrow view appears not so bright as the other, they must look upon it as the forerunner, if not the beginning

ning of a *Webb* or *Cataract* ; and therefore have recourse to such Remedies, as by their acuminate Particles have a Vertue of penetrating and dissolving that gross and viscid Humour, which by degrees degenerates into a *Cataract*. But have a Care they don't hurt the Substance of the Eye, either by their sharpness, or too frequent application. To answer this end, you may distill a Water of *Sulphur, Vivum, Turpentine, Honey of Roses*, and of *Plantin* and *Eye-bright*, wherewith to wash your Eyes ; you may also make an Infusion in Wine, of *Ginger, Cinnamon, Mace, Nutmeg, of Sage, Rosemary, Majoram, Lavender, Balm*, and such like, and after the usual Evacuations by Purging, Bleeding, Cupping, &c. put two or three Drops of it at a time in the Eye ; but my before mentioned Eye-water excells all the other Compositions that ever I met with. However, if after all, the Evil encreases, the only way left for the Patient is, to stay till the *Cataract* comes to its full Maturity, when it may be removed, and his Sight be restored by Couching.

But

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But since in most Diseases of the Eye, the ill habit, not only of the Body, but also the disposition of the affected part either remains, or soon returns after Cure, it is absolutely requisite the Party should take effectual Care against a Relapse. This must be effected partly by a proper Diet, partly by Medicines. Those whose Diseases of the Eye owed their Origin to gross and viscid Humours, ought to use moderate Exercise, some Wine at their Meals, and sometimes also in the Morning, but mix'd with Water; they may season their Sauces with Ginger, Pepper and Nutmeg, but above all, with Cinamom; for all these having an extraordinary quality of correcting the Crudities of the Stomach, and consequently of promoting Digestion, prevent the gross Vapours from ascending to the Head, which afterwards send those viscid Humours to the Eye.

If on the contrary the Disease did proceed from a hot Cause, as in Inflammations, and other sharp and thin Defluxions, then you must abstain from all Spices, Wine and such like, and make use of a cooling Diet; use sometimes

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times *Phlebotomy* and other Revulsions, but above all, keep your Body open in these as well as all other Distempers.

Concerning the Medicines useful for the Preservation of the Sight. You may prepare *Ale* or *Beer*, with *Eye-bright*, by hanging a good Handful of this Herb in a Gallon of *Ale* or *Beer* in a *Nodulus*, and let it Ferment together; you may do the same in New-wine, or make an Infusion with it. If you desire a more compounded Medicine, you may add to them some Spices, as *Nutmeg*, *Mace*, some *Cloves*, *Cinamom*, *Fennel-seeds*, *Majoram*, *Sage*, &c. according to the Constitution of the Patient, and the Nature of the Disease. Among the external Remedies, which strengthen the Sight, and disperse the cloudy Vapours; are the distill'd Waters of *Eye-bright*, *Roses*, of *Fennel*, and of the Wood of *Aloes*; with these you may gently wash your Eyes. Two Scruples of *Sal Gemma* dissolved in an Ounce of *Rosemary-flower-water*, and afterwards well filtred, is an excellent Preservation of the Eye against dimness, and so is the *Calaminar-stone* extinguish'd in the best White-wine, and the Liquor of *Sugar-candy*, dissolved in the White
of

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of an Egg hard roasted, the Yolk being taken out, the Liquors must be drop'd in the Eye. The immoderate use of *Venery* and Watching, and the leaning down of the Head after Meat, either with Writing, Reading, or Working, is very Noxious to the Eyes.



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